NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

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AGRICULTURAL PREMIUMS.

JOGGING along in our onward course through the year, we now find ourselves entering upon one of the dreariest of the autumn months. Even the cattle themselves seem dissatisfied with the out-door prospect, and turning from the field, look to their masters for food and shelter, and at no season in the year, perhaps, does farm stock suffer more from neglect than during that period which intervenes between heavy frosts and the snows which finally drive them to the barn. But after attending to all their wants and to all our other field duties, November affords the thoughtful farmer time for study and reflection. Among many other subjects which claim our attention the proper management of agricultural fairs is one that should not be forgotten.

In looking over the various reports of Agricultural Societies, several reflections have occurred to us. The question has been raised in our mind, whether agricultural premiums awarded as they now are, and for the objects for which they are now given, have not done about all the good which they are capable of doing.

They were originally offered to encourage the production of better varieties of animals, fruits and vegetables; better methods of farm and garden culture, and to stimulate the invention and introduction of better mechanical aids on the farm. Doubtless they have contributed in no inconsiderable degree to accomplish the ends for which they were intended. But we have now reached that point at which it becomes a question, whether many of the objects for which premiums have been granted year after year, need any further encouragement. As the demand for them renders their cultivation sufficiently profitable to stimulate to a large production, and that of the best varieties, why should premiums any longer be offered?

Does the production of apples or garden vegetables require to be stimulated by the offer of premiums? Does not the price in the market afford a sufficient inducement to cultivate them, and are not the more profitable varieties determined by the demand?

The cultivators now understand the best methods of culture, and have ready access to

abundant means of information, and regard to their own interest will do all that is needed in this direction; and even if this were not true, the statements of the premium-takers would afford them but little aid. The offer of a premium may induce the fruit-raiser, or vegetable raiser, to pick out the finest specimens of his crop, and exhibit them on the tables, thus adding to the richness and beauty of the show, but it is not so easy to see how it will increase the quantity or improve the quality of his crops.

If an individual offers a new and promising variety, it may be proper to encourage him by a premium to test still further the value of his article, and to reward him for his enterprise. But does an article whose value has been satisfactorily proved, and for the cultivation of which the demand is a sufficient inducement, require a premium?

It has occurred to us that the premium lists of our Societies require a complete revision, and that premiums should not continue to be given from habit, merely because they have been given in years past. With regard to many articles, circumstances have entirely changed. For example, our ploughing matches have become little more than opportunities for advertising the ploughs of different manufacturers, and the manufacturers can well afford to pay the awards to successful competitors. There should be much greater discrimination in the objects for which premiums are offered. Those especially should be selected that will lead to careful experiments, and bring out such practical information as the farmer needs, and they should be changed from year to year, as circumstances require. We would suggest as subjects for premiums at the present time, the restoring to fertility of exhausted soils, by ploughing in successive green crops, the culture of winter wheat, by ploughing in the seed three and four inches deep, before the 15th of September, and also the drilling in of wheat, both winter and spring wheat, the amount of land and of seed being specified, and a careful statement of the whole process being given.

Let premiums be offered for the entire crop of vegetables raised on a given amount of land, including the small as well as the large vegetables, with a statement of the cost of raising them. If a farmer selects the best specimens from a hundred bushels of potatoes, and exhibits them, what useful information is given by it? It would be a wretched crop indeed, from which a basket of good ones could not be selected.

The same remark may be made with regard to all other vegetables. But if the entire crop is shown, either to the committee, or at the exhibition, with a statement of the cost, and the present value and the method of cultivation, a fair comparison may be made, and some useful information gained.

Most crops are cultivated for profit, and the farmer wishes to know the cost of cultivating them.

If a crop costs twice or three times its value in the market, why should a premium be paid for it? If it cannot be raised within its market value, so as to allow a margin for profit, neither farmer nor gardener will engage in its cultivation.

More careful statements of the cost of raising articles should be required. We have often noticed that premiums are awarded for fruits and vegetables to amateurs, who expend, upon their one or two acres, as much for manure and labor as the farmer expends upon his fifty or eighty acres. The premium articles may be a little more perfect, or may be got up for the show in a neater manner; but if they have cost twice or three times as much per bushel or pound, this fact ought to be known and taken into the account in making the award.

If one man raises a crop at half the sum which it costs his neighbor to raise a similar crop, why should not he have the benefit of it, especially if, by his statement, he can teach his neighbor how to do the same thing at the same cost?

We know a gentleman who cultivates two or three acres of ground in potatoes, corn, beans, tomatoes, cabbages, beets, turnips, &c. He keeps a man all the year at the highest wages, and employs another man at least half the growing season, and hires all his ploughing and teaming besides, and labors a good deal himself. His vegetables make a fine show at the exhibition. But if he would exhibit an account current with his vegetables, the farmer who looks upon them with admiration would have no feelings of envy towards him. Not the man who makes the best show is en-

titled to the premium, but the man who makes the best show from his acre at the least cost. We have made several other reflections on looking over the reports referred to, but we have said quite enough for once.

ANGLO-MERINO SHEEP.

This is the name applied to a breed of sheep introduced some years since into England, and which is represented as the product of a cross of the merino with the English long-wooled sheep. This latter has been brought to a condition of great excellence by the exertions of Lord WESTERN, and is represented by those who have seen it, and examined specimens of the wool, as being in every respect a fine animal. At the Smithfield Cattle Show, samples of this cross excited great admiration, and were for a long time the subject of comment and eulogy in the various agricultural and other journals.

In a number of the *Farmer's* (London) *Magazine*, Lord WESTERN published a letter, accompanied by documentary statistics and proofs, going to demonstrate the high value of this breed, both in reference to carcass, and the superiority of the wool. The weight of some of his wethers, was, after being dressed, one hundred and fifty pounds. Of this weight, from twenty to twenty-five pounds was fat from the intestines. The wool averaged, in the cross breed, more than five and a half pounds per head, in a flock of two hundred and one sheep.

The chief object of Lord WESTERN in instituting his interesting series of experiments, appears to have been the desire to ascertain, practically, the feasibility of engrafting the Merino wool on the Leicester carcass. In his letter he remarks that his sheep may not fatten so early or equal to the weight of the Leicester, yet they give a handsome carcass, and carry a heavy fleece, equal in quality to the Merino; and that they are, upon the whole, an improvement in hardiness, upon the Merinos.

The sheep is a valuable animal, and one which is, perhaps, more readily susceptible of improvement through the instrumentality of good keeping and judicious crossings, than any other domestic animals kept upon the farm.

In this country, a variety of influences have long tended to divert attention from this important subject, but for several years past, there have been unmistakable indications of an awakening interest, and many of our farmers are moving forward in the work of improvement with great zeal.

NEW PUBLICATIONS.

AMERICAN FISH CULTURE, embracing all the details of Artificial Breeding and Rearing of Trout: the Culture of Salmon, Shad and other Fishes. By Thaddeus Norris, author of "The American Angler's Book." Illustrated. Philadelphia: Porter & Coates; Boston: Lee & Shepard. 1868.

Fish Culture means simply the rearing of fish by artificial means, which protect them from many of the dangers to which they are exposed in their natural haunts, and, by feeding and otherwise, improving on nature. Within a few years past Dr. Fletcher, of New England, Dr. Daniell, of Georgia, S. H. Ainsworth, R. B. Roosevelt and S. Green, of New York, as well as the author of this work of Pennsylvania, and others, have interested themselves in this subject, and have done much towards stocking our inland waters with desirable varieties of fish.

Fish culture is an old art, in which the Chinese have long been proficients, and with whom the fecundated spawn is still an article of traffic. We are told that the value of fish kept in the ponds of Lucullus, an old Roman citizen, who lived on the shores of the Gulf of Naples, amounted to a sum which in our money would be equal to two hundred and fifty thousand dollars. And why, in modern times, should not "the waters bring forth abundantly the moving creature that hath life," as well as the land?

The author informs us that the publishers of several agricultural papers have offered to pay him liberally for short articles on fish culture, but that he has invariably refused for the good reason that the subject could not be properly treated in the space usually allowed to such articles. He has, therefore, reserved his teachings for the more ample accommodations which a three-hundred page volume affords.

TRAINING ANIMALS FOR WORK.

There is a great advantage in having all brood animals well and thoroughly trained. The offspring of such are more tractable, and have less natural fear of man. All animals, male or female, used for breeding, should be thoroughly domesticated and taught to handle well, and have no fear of man. By this means, their value for labor may be greatly increased, and their care rendered much more pleasant and satisfactory.

In training animals it is necessary to understand their nature and habits.

Habit is with brutes, as with men, an iron-

handed master. It is one of the essentials in early training to bring the animal to depend upon the driver. Feeding, watering, care, and training should be mainly by one person. There should also be a strong friendship, a familiar acquaintance, and the fullest confidence of the animal. There need be no fear of unrequited affection. All our domestic animals love naturally the hand that cares for them, and the voice that calls them.

The trainer. He who is not thoroughly under self control, should never attempt to instruct the ignorant of either his own or a lower race of animals. He cannot succeed well. The voice, the eye, the lip, and motion betray the ungoverned man. How can he govern others and train in good ways, who cannot govern himself? He who would instruct, must never yield the slightest evidence of passion, anger, or even impatience. Reason is his strength, and good sense his best reliance. How important, then, that his mind be free from the dominion of bad habits, enslaved by no excesses. No intemperate man should ever take charge of animals in training. Bad habits are mainly the result of want of care or of mismanagement on the part of those having the charge of animals.

Animals have no knowledge of wrong or right, of cause and effect, or of hope and reason, to stimulate them to labor. Their labor is obtained through man's power over them. Let not that power be abused. By good judgment and kindness show yourself worthy of the service of a well-trained, noble animal.

YIELD OF WHEAT IN WISCONSIN.—J. W. Clark, of Green Lake Co., Wis., writes to the *Country Gentleman* that the actual yield from the threshing machines, on some forty of the farms on the prairie soils of that part of the State, per acre, ranges from six to thirteen bushels—the more general range being from seven to twelve bushels per acre. Some of the most intelligent growers set the average at nine, and others call it ten bushels per acre. On the timbered land the production is a bushel or more per acre better—the average being stated at eleven bushels. From personal observation the writer says that the yield in Ripon county is no better, though the city papers, at harvest time, gave reports from some sixty stations in that section of "good crops."

AGRICULTURAL ITEMS.

—During the harvest this year in Braemar, Scotland, a snow storm lasted several hours; the snow lay until next day, and the cold was intense.

—The fund of half a million left by the late Mr. McConough, of New Orleans, for the endowment of an agricultural school of a high order, is about to be rendered effective.

—At the late show of the Newton, Mass., Jersey Stock Club, a cow was sold by Mr. Wellington, of Lexington for $600, and a calf to Mr. Joseph Burnett, of Southboro, for $160.

—To take rust out of steel, rub well with sweet oil, and let the oil remain upon them for forty-eight hours. Then rub with leather sprinkled with unslaked lime, finely powdered, until all the rust disappears.

—The towns along the river Amazon in South America, in the midst of the most productive country in the world, get meat, flour, and dried fruits from North America and Europe, because the people are too lazy to work.

—In the late report of the Connecticut State Board of Agriculture, it is stated by a Mr. Hyde that an Alderney calf of his dropped a calf at eleven months and ten days old, by a bull weighing 1800 pounds.

—Dr. Trimble says he once saw a cypress tree in the Dismal Swamp, Virginia, which was cut down and the rings showed it was 1100 years old. And this tree was growing over another tree which was much larger.

The editor of the *Rural World*, on a late visit to places on the North Missouri Railroad, was astonished to learn that there was hardly a single well in a county,—people being dependent on rain water kept in cisterns.

—It is estimated that the rain fall in the Northern States is forty inches, the Southern States fifty, Minnesota, Western California and Colorado thirty, Nebraska and Utah twenty, Kansas and Western Arizona fifteen inches. This is a general average for a series of years.

—Dr. F. C. Brunck, writes from the grape regions of the Rhine to the *Buffalo Courier*, that choice vineyard lands are held there as high as $4000 in gold per 116 square perches,—about $1400 per acre—and in common situations $280, or nearly $100 per acre.

—A correspondent of the *Rural New Yorker* says no grape should be counted as even approaching perfect ripeness when the stem does not exhibit a deadened and shriveled, blackened character at least three-fourths of an inch from its connection with the branch on which it grew.

—S. Foster, Esq., writing at Muscatine, Iowa, Sept. 3, to the *Country Gentleman* says, corn is a heavy crop, and most of it now fast getting out of the way of the frost. Potatoes above half a crop. Splendid crop of grapes; our town is fully sup-

plied with this luscious fruit, in its most fair, ripe and perfect condition—I mean Concords, at 8 cents per lb., wholesale 6½. Our people are eating them, and stewing them for sauce, making pies, and canning them for winter and spring use, making preserves and jelly.

—The Newark, (N. J.,) *Advertiser* says that a low estimate of the cranberry crop this season in and around Manchester and Tom's River will not come short of 15,000 bushels, worth at a fair valuation $100,000. In two years the present area already planted will yield at a moderate estimate 45,000 bushels.

—Mr. G. Sillar, of London, has discovered a process which will make the sewerage of towns invaluable as manure. His purifier consists of blood, clay and other ingredients. In an experiment at Tottenham, England, he purified 36,000 gallons of sewerage in twenty minutes, and the solid residuum was found to be worth twice the amount of money expended in the process.

—The report of the committee on swine at the Hubbardston, Mass., town cattle show was as follows:—

"No swine to-day, not even one,
We know not what it means;
We hope that those who slight these shows
Will get no pork and beans!
No swine to-day, oh what a pity—
And five old men on the committee."

—The shipment of cheese from St. Albans for the month of September was 1443 boxes; of spring water, 2015 boxes, and of butter 4005 firkins. The total weight of the butter was 236,290 lbs. The average price was forty-one cents, which shows the receipts of the farmers of that section, from this one product alone, to amount in a single month to $96,778 90.

—The old story, that was shown to be a mere fiction years ago, about one A. M. De Sara, near Paris, making an annual income of $175,000 clear of expenses, by keeping hens on dead horses, has been re-vamped by the *California Farmer*, and "takes well" with a portion, at least, of the agricultural press.

—Boys, did you ever think that a potato's skin was designed to protect the mealy part from the action of the atmosphere, much as your own skin protects the more sensitive parts from the air, and that you ought to be about as careful not to break the skin of a potato as you are not to bark your own knuckles, or to bruise your choice winter apples? But who cares for a potato skin? And so they are knocked, and bruised, and barked, and people wonder they don't come out mealy and sound.

—An Illinois correspondent of the *Country Gentleman*, says that in that section a new style of rearing Osage Orange plants for hedges has been recently adopted. It is to plant the quicks from sixteen to eighteen inches apart, allow them to grow until the third year, and then *plash* them; that is, cut the plants a little more than half off, close to the ground, and then lay them flat in the line of the hedge. The shoots that then break from every bud, and grow upright, making a fence that will turn a rabbit or a cat.

—A writer in the *Country Gentleman* believes that when whole tubers are planted, the stalks or vines of potatoes grow too succulent and rank, and says he succeeds best in growing healthy potatoes by sprouting them in a heap, and then removing and planting the sprouts and the fibrous roots adhering to them.

For the New England Farmer.

THE GARDEN FOR NOVEMBER.

This month will close the income from the garden for this season; yet there comes a somewhat busy time, not only in finishing all our harvesting, but also in preparing for spring work, and looking to the proper protection of the various crops and plants that are to be kept through the winter, either for consumption or spring culture.

After having gathered the crops it is well to review the labors of the season, and see wherein we have worked at a profit, and where at a loss, and to plan for future improvement. And here I would suggest that if a memorandum of all the operations in the garden was kept, it would afford great interest and satisfaction as a matter of reference. By it we could ascertain the date of planting any particular crop, the time it came up, how fertilized, when it ripened, and in short the whole history of its culture and produce. Such a record will not only be an assistance to yourself, but to your children who follow you. With a plan of the garden on paper, and each plat numbered, a much more definite record can be made, and easier referred to. But it may be objected, that this takes time and labor. Very true, but how are you going to find out the proper time and manner of cultivating the various crops if no one keeps a record, or remembers better than most people do? And does it not also require time and labor to hunt up the information when needed?

Much may be done towards interesting the children, and inculcating a love of rural pursuits, as well as encouraging them to form habits of industry, by allowing them a small patch for a garden of their own. Now is a good time to set off a plat for their exclusive use and occupancy. Do not locate it in some out of the way corner, but give them a pleasant, good plat, and then instruct and assist them, if necessary, in preparing it. The thought that they have something of their own, and that you take an interest in their pursuits, will encourage them, and once interested when young, they are much more likely to be contented on the farm, and to form habits of industry and economy, than when nothing of the kind is allowed. If they desire to plant a few flowers, encourage them in that,

and endeavor to interest them in all laudable rural pursuits, and lead them to cultivate a taste for the ornamental as well as the useful.

My notes for November in the garden will be brief. If previous directions have been attended to, little remains to be done.

ASPARAGUS is a luxury, in early spring, which many scarcely know anything of, but which is easily secured; and every garden ought to be supplied with a bed. In some localities new beds may yet be formed, by trenching and working in good strong manure, bones, old leather scraps, salt, &c., in the bottom soil, making it rich and deep, for once well formed it lasts many years. Procure and set good strong plants, as heretofore directed, and cover with a heavy mulch of manure, &c., for winter protection. Clear off old beds and mulch with coarse manure.

CABBAGE.—Put those not already harvested, into the cellar, or in trenches, before hard freezing weather, as that injures their keeping qualities, though they will stand something of a freeze. If stored in the cellar, they keep best set out, not leaned against the wall or each other closely. They keep well buried in well drained, dry soil, out doors, by digging a trench wide enough to receive the heads and so deep that the heads may be covered four or five inches. Pull off some of the loose leaves and set them heads down, close together, and fill in the soil, raising a ridge, and leave only the roots above it; spat it with the spade to shed water, &c. With this practice I have been conversant many years, and they come out as wanted in the spring, fresh and crisp. I have known others to be set with the heads nearly level with the top of the ground, and then covered with corn stalks, boards and earth. When so covered they can be got at more readily during winter.

CELERY.—Dig and store in boxes in the cellar, setting the plants in the box as they come out of the ground, filling in dirt, and using care not to get any into the centres or heart.

CURRANTS AND GOOSEBERRIES.—Make cuttings at once, if not already done, and pack them down in sand in the cellar bottom. Give the old roots a good mulch of manure.

GRAPE VINES.—By many, this month is considered the best time to prune. To produce choice fruit they need cutting back, the new growth, to two or three buds, and the vines taken down and covered, to protect them from sudden changes in the weather. As you prune make and save cuttings, and preserve by burying in sand, or packing in damp moss.

SQUASHES AND PUMPKINS.—These have all been gathered before this, and now we have to see to their winter keeping. They keep as well as any where in a dry, cool cellar, laid singly on shelves. I once knew a man who kept winter crookneck squashes, good and sound, on a swing shelf overhead, in an old-fashioned kitchen till warm weather came. The main thing is to have them well ripened, and perfectly sound, and then kept dry, and from freezing.

TURNIPS.—Late crops will continue to grow as long as the ground remains open; but there is danger of their being frozen in, if not gathered the fore part of the month.

W. H. WHITE.

So. Windsor, Conn., Nov. 1, 1868.

POTATO DIGGING BEE.—The *Vermont Record and Farmer* furnishes the official report of a Potato Digging Committee, represented by F. June, Chairman; Z. Nearing, Secretary; and T. Clark, Weigher, which performed the distinguished duty of digging 809 pounds of the Early Rose, from a field belonging to H. C. Merritt, of Brattleboro', we presume, though not so stated. These 809 pounds were the produce of 7¾ pounds of seed, reminding us of the wonderful production of the Rohans, a few years since. In rows of equal length, those planted with one eye in a hill yielded 139½ pounds; those with two eyes in a hill, 203¾ pounds per row. The product of a single eye in one case was 6¾ pounds.

ILLINOIS.—At the annual meeting of the Wool Growers' Association of this State, held at Quincy, Sept. 23, A. M. Garland was elected President; S. P. Boardman, Secretary; J. L. Mills, Treasurer, with thirteen Vice Presidents. Resolutions were adopted recognizing in the existing tariff equitable protection for the growers and manufacturers of wool; in favor of selling wool on its merits, and in favor of a hearty co-operation with the manufacturers of the West in an exhibition of wools and woolens in 1869.

FARMERS' SHOE GREASE.

Put into some fire-proof vessel one-fourth pound of lard or soft grease like lard, one-fourth pound of tallow—beef or mutton tallow—one-fourth pound of beeswax, half a pint of neatsfoot oil, three or four tablespoonfuls of lampblack, and a piece of gum camphor as large as a hen's egg. Melt the ingredients over a slow fire, and stir them thoroughly after they are melted. Never heat it so hot as to make it boil. Soft grease which has salt in it will not injure the leather. Now, have the leather warm, and warm the grease, not so it will flow, but have it so soft that it may be put on with a brush. Should the leather seem to need it, give the shoes or boots an oiling occasionally. It is not best to dry this shoe grease all in before the fire, but allow it to re-

main on the surface of the leather. A light coat of this kind will exclude the water even if the boots are exposed to the wet all day. This shoe grease will not injure leather by rendering it hard and inelastic. When a man's boots are exposed to wet, he should wash them clean at night, and hang them up in the kitchen where the leather will dry gradually, and put on a little grease every morning. It is far better to grease a little often than to grease bountifully every ten or twelve days. Leather should not be allowed to become very dry before greasing. Always apply the grease as soon as the leather is almost dry; then the leather will be mellow, and never become hard. Nothing injures boots or shoes more than to set them aside to dry when covered with dirt. Keep boots and shoes away from the fire when they are liable to be heated. Heating the leather injures it.

LAY UP THE PIECES.

Any farmer who does not practice saving pieces would be surprised at the real profit derived by laying up the odds and ends about his premises. Every day almost there are bits thrown away, at the time considered of no value, which perhaps not many days subsequent would save both time and money. How many times a year does a farmer want a strip of board, a piece of wedge or pine timber, something for a hammer handle or rake tooth, which cannot be obtained without spoiling valuable material, or going to some carpenter shop, and perhaps while this delay is made, a team and hired man are standing still waiting for a broken tool to be put in order?

But very little would be required while working at the wood pile to sort out and split into proper shape bits of tough timber and lay them up in some out of the way corner, and also to throw up small pieces of boards, such as are usually used for making kindling wood. A strip of board not more than two inches wide may be wanted sometime in a hurry for cleat upon a wagon box, or of some other size for another purpose, and the saw have to be applied to a whole board to obtain it. The repairs upon buildings, making board fences, splitting stakes or stove wood, always makes pieces in just about the shape that will be wanted at some future time, and they should never be wasted. These fragments possess of themselves no real value at the time of laying them away, but their worth is in supplying a want, and saving hinderance and perplexity in a busy time.

It is just as essential to save pieces of leather, scraps of iron, screws, nails, bolts, hinges, wire, buckles, rings and rivets. Any amount of this material is cast away annually, or sold for one cent per pound, which if saved would have been worth dollars perhaps. By this we do not intend to advocate that when a breakage occurs upon any farm implement, patching up will answer for permanent repairs, for all tools should be kept in the best of order, but there are times when plowing, harrowing, or at some other work, that the harness or some tool will give out and by the aid of wire, nails, buckle or a piece of tough timber the breach may be quickly repaired, and with sufficient strength to last until the hurry is over, and time can be spared as well as not to take the implement to the work shop.

A stitching awl and a few waxed ends kept on hand will often save a hundred times their cost.—*Ohio Farmer.*

WINGS OF BEES.

Here is something relative to the formation of the wings of the honey bee, which seems to have passed unnoticed by the bee experts of the country, probably I might say by the world in general,—at least I never saw it spoken of in any work on bees. The propelling power of the honey bee consists of four wings, two on a side, and the peculiar construction of the wings is such that they can form two (one on a side) out of the four. Examining a cluster of bees, some could be seen with two broad wings, like those of a fly, while others would have the four. To solve the mystery, I placed a wing underneath a powerful microscope, which unfolded the mechanical means whereby the four wings were made two. The peculiar feature consists of twenty minute hooks upon each back wing, hooking upward, and a sort of ledge upon the underside of the front or large wing, which the hooks match into, forming one wing of two. Upon examination I found that queen, workers and drones all have the same number, and in the same relative position. The question is, do they avoid using the back wings, except in case of heavy loads, to preserve them from wear, (the wings of old bees become so worn and ragged that it is difficult for them to fly) or can they fly faster while empty with only the two forward wings? Be it as it may, I leave the question for conjecture.—*M. S. Snow, in Co. Gent.*

DECOMPOSING SODS.—Every farmer, gardener and fruit grower should gather sods whenever opportunity will permit, and pile them up in some corner or out-of-way place to decompose. Sods are the cream of the soil, and wonderfully supplied with fertilizing properties, making one of the very best invigorators for trees, vines and plants. They may be easily obtained from fence corners of tilled fields, or gathered from the surface after ploughing and harrowing sward land. Pile them up grass downward and cover the heap with a coat of ashes to keep grass from growing. A year or two will be required for them to thoroughly decay. Water should be applied at intervals sufficient to keep the pile moist in a dry time to prevent a dry mouldy rot.—*Ohio Farmer.*

THE SPANISH, OR TEXAN CATTLE.

We take much pleasure in giving our readers this month a capital picture of a group of this half civilized, wild-looking race. Our cattle reporter assures us that it is a correct and life-like representation of the specimens he has often seen at Brighton. Their connection with the late cattle disease will give an interest not only to the cut, but to the history of the race, both of which we copy, by permission, from Mr. Allen's valuable work on "American Cattle."

We should hardly speak of this strange race of animals, were it not that of late years they have found their way, to some extent, into our sea-board markets. They are descendants of the early Spanish stock introduced into Mexico in the sixteenth century. What they were

when first imported there, we have no knowledge, but presume them to be of the same race as those long kept by the Moors on the plains of Andalusia, and by their successors, the Castilians, for many centuries—of no great excellence in Spain, and not at all improved in Mexico.

In a recent letter from Mr. A. B. Allen, of New York, (received in July, 1867,) then travelling in Spain, between Gibraltar and Granada, he thus describes the Spanish cattle of the present day, as he saw them there: "I have seen numerous Spanish herds. They are about the size of our old-fashioned common cattle. They have large, coarse, long and wide-spread horns, mostly with a half, or full twist to them, and set back, rather than forward, with the points outward. Their colors are black, dark brown, reddish-brown, light yellowish-red, with some white on the throat and belly, and occasionally a black and white roan, or dark grey. The cows are nearly as large as the oxen, with the same style of horn. They do not appear to be good milkers. The heads are long, and rather fine. The herdsmen attend them in droves with dogs, like the short-haired Scotch Colleys."

In this brief description, may easily be detected the origin of the modern Texan cattle, run wild for many generations, while the Spanish are thoroughly domestic in their habits, and treated with care, as the density of population, and close husbandry of the Spanish people at home, compel them to be. Undoubtedly the originals are much better animals under the treatment they receive, than their half-savage cousins, at such a far distant removal.

The Texans are, in fact, a semi-wild race in America, the mild climate of the tropics, with its abundant perennial herbage, affording them all of food which their natures require. There they range, propagate and grow, with little care, congregating in large herds, and known by their owners only by the marks, or brands, they put upon them. They are annually gathered for identification, when the young calves are castrated, and those fit to sell, selected and driven to market. The cattle pay little attention to the widely scattered ranches of their owners, and rove for miles away, attracted by better pasturage, the scattered salt-licks, or in the indulgence of their own vagarious habits. We illustrate a group of the bullocks, drawn by our artist as they stood in a cattle yard, on their arrival at market.

These portraits are truthful, as we saw them in a herd of about forty in number, and know them to be correct. Their live weights, at the time—the animals ranging from five to seven years—averaged 1,008 pounds. A short description will suffice.

They are tall, lank, and bony, coarse headed, with enormous horns; (only exceeded in length by a pair in our own possession, brought from the Island of Sicily, in the Mediterranean. The shells of these Sicilian horns, are three feet four inches in length, spiral, and gracefully turned, thin, and almost transparent.) Their legs are long and coarse; they have much dewlap, and little brisket; are flat-sided, swayed in the back, high in the flank, with narrow hips and quarters, great offal in proportion to their consumable flesh, and coarse all over. Their meat must be stringy, tough and of coarse quality. Wild and savage in appearance, they looked scarcely more civilized than a herd of Dacotah Buffaloes.

In contrast to the specimens above described, it is but fair to say that we have since seen better animals, so far as flesh and condition was concerned, of the Texan cattle. They were a small herd of some thirty in number, which had been brought by the cars to the Buffalo Cattle Yards for sale. They had been well fed on corn and grass for several months, and looked sleek, and in good flesh, so far as such raw boned and loosely made up cattle could be. They were six to seven years old, and made an average weight of over 1200 pounds each. Good four year old grade shorthorn Western steers were selling at the yards, the day we saw them, at 7¼ to 8 cents per pound, live weight. The Texans were sold the same day for 6 cents.

Now, adding the two or three years additional forage which the latter had consumed, the interest on their value after four years old, and then deduct the one-fifth to one-fourth less price they sold for, together with the contingencies of disease or loss by death meantime, and the comparative economy in breeding and grazing such cattle by the side of those of good flesh-producing breeds, or their crosses, is easily solved.

Great numbers of these cattle are driven from northern Texas and New Mexico, up through the Indian Territory into Kansas and Missouri, thence into Kentucky, Illinois, and so on eastward. They stop little to graze on their journeys, as they gain but a small increase of flesh in a land of civilization, and the sooner they arrive at the shambles the better. They are worth little to the butcher or consumer, and, but that they cost little to their breeders, would, as a commercial article, be comparatively worthless.

Their colors are red, dun, yellow, black, brindle, and blue roan, all mixed more or less with patches and strips of white.

As an economical animal to a farmer of the Northern, Middle, or Western States, they can be of little value, as the cows give no more milk than will raise a calf till it is old enough to graze. The bullocks are too light for heavy work, although sufficiently active; and for beef, where a choice article is in demand, their value must be low. Some of the improved breeds may be crossed upon them to advantage, no doubt, but it would take sev-

eral generations to breed their coarseness and wild nature out. It is a question whether it would not be cheaper to introduce our better natives, even into their own country, with which to commence a profitable herd. The common run of Texan cattle must be doomed to extinction, ultimately, before the better breeds.

We only mention them here, because in their own ranges, and over an extensive territory, they are the prevailing cattle, and many of them there must be of better quality than we have described. A few short-horns, from Kentucky, have, years ago, been taken to Texas, with an effort to improve the native Mexican stock, but we hear of no results worth noting; nor can there be much improvement, so long as they retain their wild and vagrant habits. These cattle, in addition to Texas and New Mexico, are extensively kept by the natives in the Mexican territory of Lower California, the adjoining Provinces, and to a considerable extent in our own State of California itself.

There should be a *sanitary* law, if nothing else, to regulate the introduction of these cattle into the States north of Texas or New Mexico, as they have either brought with them, or originated within themselves on the way, deadly diseases, which have spread from them while in our Western States, into which they were driven for market, and large numbers of valuable cattle have died from their contagion. We give an extract from one of our agricultural periodicals, touching the disease we have alluded to:—

"The Texas Cattle Plague. — The troublesome and dangerous disease introduced occasionally among the cattle of Missouri and Kentucky, by those driven from Texas, to which we have heretofore referred, is now called by this name in our Western exchanges. The *Farmer's Advertiser*, (a periodical just established at St. Louis, under the editorship of Dr. L. D. Morse,) says:—

" 'We have seen a letter addressed to a friend, from a gentleman in Southwest Missouri, which details his experience with the cattle plague from its first introduction to the present autumn—the substance of which is, that there was no such disease known prior to the introduction of Texas cattle; that up to 1860, he was a heavy loser annually by it. That from 1861 to 1865, the rebellion broke up the cattle trade from Texas. During those years he lost not a single head, though a large dealer in cattle all the time. That in the present year, soon after the first appearance of Texas herds, the disease broke out again, and he had lost upwards of 150 head during the season—as many as 20 dying in a day. He recommends that the present law be so amended, as to entirely prohibit the introduction of these cattle, from the first of April to the first of October; and that from the first of October to the first of April, there be no restriction.

4' 'There are not sufficient data to determine how early in autumn they can be permitted to come in with safety; but as the disease this year broke out in the vicinity of St. Louis (at Cheltenham,) late in October, it appears that the first of October is too early by a month at least. The first victim was a fine cow, bought out of a Texas drove; in the course of ten days, seven other cows running in the same pasture took it and died. On the 30th of October, we had the first white and killing frost; since then there has been not a single case. It would then seem that the disease is checked and controlled by frosts; the inference therefore is, that there is no safety in suffering them to come in until cold, frosty weather sets in, which hardly ever comes earlier than the first of November.' "

As to their value for any economical purpose, beyond their hides, what little tallow they have, their horns and bones for manufacturing or fertilizing purposes, we consider them of little consequence within the bounds of modern civilization, or intelligent agriculture.

Remarks.—It may be proper to say that the foregoing remarks on the Texan cattle disease were written several months previous to the late excitement upon the subject.

For the New England Farmer.

FARM PRODUCE IN MARKET.

Why all these stale eggs, this bad butter, poor cheese, bruised, decaying fruit, coarse and worthless vegetables, lean and tough meats? In short, why is so large a part of the products of the farm of an inferior quality and in a damaged condition when they reach the consumer? Do not farmers yet know how to raise, prepare for market and sell the staple and common crops, or are they catching the spirit so prevalent in American manufacturing of slighting and shamming everything they do. Surely with all that is said and done for the promotion of agriculture, people have a right to look for a steady improvement in the quality of provisions.

To answer these questions, it is necessary to consider who establish the standards for which farmers aim, and who fix the system of marketing. Farmers, like manufacturers, cannot alone create their own market, or dictate what articles shall be sold. To a certain extent they cater to the public taste. A prominent feature of trade is that any article to sell well, to be popular, must be offered at a low figure. This desire to get everything at the lowest price possible, extends to the provision trade and inclines many to buy the lower grade of goods. A mistaken idea of economy leads others to select goods of this description.

Hence the bulk of the provision trade cannot be rated higher than second or third quality, while the portion that can rightly be called first quality, is a very small part of the whole. If the public only demanded a better quality of goods, and would willingly pay the corresponding increase in the cost of production, it would be easy to comply with their request. But consumers, generally, do not appear to realize that there is a difference in the expense of raising a good and an inferior article.

Take for example the potato. All readily perceive the great difference in their qualities, but few will willingly make a corresponding distinction in the price. They wish to buy the better kinds at nearly the ordinary price of the poorer varieties. The truth is the coarser and more hardy varieties always give a larger and more certain yield than the finer and delicate kinds, and can really be afforded from twenty to fifty cents per bushel less than the latter. As this difference cannot be easily obtained,—the prices of all sorts in market being very near the same,—farmers at once learn it is for their interest to raise the coarser and more hardy kinds. So with all vegetables and fruits, those varieties that give a large and certain yield of only a fair quality are the most remunerative. Before there is decided improvement in the quality of eatables, then, consumers must offer greater inducements to produce the best.

In Boston and other Eastern cities, the consumer does not usually come in contact with the producer, and the latter receives less encouragement to excel from the long array of middle men who intervene; for as a class they adhere more tenaciously to the one-price or same valuation rule, and consequently put a lower premium upon quality than consumers themselves would do. At their stores, or through agents along the railroad lines, these middlemen offer certain prices for the various kinds of produce. Good, bad and indifferent are brought to them, and generally received without variation of price; or, if varied at all, it is but slightly. Perhaps the poorer lots might not be received alone at the given price, but they help make up a large quantity, and, as a part of the whole, may pass inspection.

Even for an article that varies so greatly in quality as butter, the wholesale selling price among farmers is nearly uniform. The wide difference of prices the consumer observes in the retail trade is not made in the wholesale. The painstaking dairyman gets but a trifle more for his superior article and extra labor than the careless do for their inferior.

In collecting eggs about the country, an egg is an egg. One price is paid, although a dozen of them, from some breeds of hens, weigh from four to six ounces more than from others. By the time these arrive in the markets of the large cities they have lost much of their original goodness, from repeated handling, long transportation and keeping, and whosoever purchases these in warm weather, makes a doubtful investment. Although the producer near by may bring in his eggs clean, fresh, uninjured by carriage, and warranting every one sound, it is with difficulty he can get two or three cents per dozen above the price of railroad eggs, and take store pay at that. All know the greater value of freshly laid eggs, and traders admit it by carefully putting them aside for "particular customers." But why not make a corresponding difference in price? Why not hold out inducements for producers to take more pains to bring a good article to market?

Again, the milk trade affords another illustration of this one-valuation system. Here it is one price for the producer, and one price for the consumer. Mr. C. may feed his cows upon the best of roots and grain, the sweetest of grass and hay, and have thereby milk that pleases every one, yet not one cent more per can does he receive for it, than his neighbor B., who, by feeding upon slops, swill, sour grass, coarse and poor hay, produces, at less cost, an inferior article that nobody wants. These different qualities are all taken, and the load made up, but the milkman knows the contents of every can, and the "particular customers" again come in for their share of good things, without extra charge, while the inferior stuff is put upon the par, and those of doubtful credit, or should the dealer be strictly impartial, he mixes the different qualities together, making the good sell the bad. Thus these "particular customers," in buying many kinds of produce, receive the better portion without paying a full equivalent, while those who take the lower grades from necessity or choice, pay too dearly. To say nothing of the injustice of this mode of dealing to either party, it is manifest that its practical effects among farmers is, to give *quantity* precedence of *quality*.

But who is responsible for the damaged condition which produce presents in market? Farmers know what will keep, and generally take care to sell such in season; but when they sell they cannot dictate how long the article shall be kept, or how far transported. Your butter was not rancid, cheese mouldy, fruits decayed, vegetables withered when they left the farm. All these imperfections are the result of frequent and rough handling, too long keeping and transportation. Once in the hands of the middlemen they do with it as they please, and they exercise the right to mix, compound, extend, re-sort, or re-mark as circumstances may favor. And if the profits can be increased by storing the commodity, they do not hesitate to indulge in speculation to the sorrow and expense of the hungry public. It is well known that all kinds of farm produce deteriorate if kept beyond a certain limit, and always suffer more or less loss by transportation. Even hardy vegetables, like potatoes, cannot be exposed three or four

weeks to air, strong light, and great changes of temperature in cars, stores, and to all the rough handling they get thereby, without losing much of their goodness. A large portion of early vegetables, and perishable fruits brought long distances,—as from the Bermudas, Charleston, Norfolk, New Jersey, and the Western States,—by the time it is retailed in our markets is dear food for the human stomach at any price. All delicate fruits, in order to be transported long distances at all, must be picked before they are ripe and fit for eating. Deducting what is lost by fermentation and unnatural ripening, jambs, bruises and heating, fermentation and withering, it is strange that what remains can tempt any appetite. What man, cultivating a garden, would gather his peas, salads, tomatoes, peaches and small fruits four and six days before wanted for use, or would think eggs would improve by a week's ride in wagon? It would require some persuasion, or the artifices of a clever cook, to induce gardeners, who know what good fruit and vegetables are, to eat these articles treated in this way. They would also doubt their ability to sell such stuff. But middle men, through the position they hold, or the credit system, or superior tact as salesmen, can sell what the producer cannot. Such damaged stuff is bought, sold, and consumed, and serves to depress prices to the discouragement of home production.

Therefore, before the inhabitants of any city congratulate themselves upon their ability to obtain their supplies from remote districts, they should consider that as the distances lengthen the middlemen multiply, and the produce is placed more completely under their control, and speculations and all the evils alluded to above increase. When it is remembered that the losses incurred thereby fall chiefly upon the consumer, it would be a safe conclusion to say it is far better economy to pay a little more for products raised near by and brought in as needed, in a fresh and healthy condition. Under the stimulus of liberal patronage for home productions, many thousand acres now lying waste, or only partially improved, around every city, would be converted into gardens; consumers and producers would more frequently meet face to face, and the wants of the former would be more easily gratified. If all kinds of produce shall be graded strictly according to quality, and sold at corresponding prices, the producer of inferior articles will find little profit in bringing such to market, while those whose productions always displayed care, neatness, and skill, would realize a more adequate reward for their labor and would be stimulated to attempt still higher perfection. N. S. T.

Lawrence, Mass., Sept. 1, 1868.

—A widow woman at Concord, N. H., who had an income of over $6000 last year from her investments, does housework for weekly wages.

For the New England Farmer.

THE LAW OF THE ROAD.

Thinking it possible that your readers might be interested in knowing what this is, I herewith give my *experience* and investigations, hoping that none may ever be betrayed into submitting a question of collision to arbitration, if they should be so unfortunate as to collide or have an employee do so. My experience was this: one of my teams was passing a carriage that had stopped just outside of the usual travelled rut, standing on a forty-five degree angle with it, and, according to the teamster's judgment, at a sufficient distance to allow him to pass. His whippletrees to the forward horses cleared the carriage, and he felt all was right as they were longer than the hind ones, but to his surprise the hind ones hit the wheel of the carriage enough to say they hit. The horse in the carriage then went ahead all clear, and the team went on, the teamster supposing that all was right again—but was immediately startled by the scream of the woman who was in the carriage, but too late to prevent the breaking of the carriage which had backed into the hind wheel of the team. Now it appears the woman *backed* the horse each time the carriage was hit, and that owing to this backing it was broken. I offered to settle the matter with the owner of the carriage. He declined making or receiving any proposition, but sent me an attorney's letter which I did not heed. After a time, finding I was not to be driven, he came and proposed an arbitration. I felt he would gain a point if I refused. The result was I had to pay *costs* and expense of repairing the carriage, making it much better than before. All I have stated here as *facts* were proved by the testimony of the chairman of selectmen of the town. The *ground* of the decision was, that my team having bells, caused the horse in the carriage to start, the woman was frightened and pulled back on the lines, and I must pay for it, as my team did not leave one-half the road for the carriage to back and go ahead in.

Our laws require turning to the right, giving one-half the road. Loaded teams are by courtesy allowed the whole road when it can be done without too much inconvenience. Almost all men driving a light carriage will do this, especially on bad roads, or up hill. If collisions occur when the party is out of his proper place in the road he is liable to damage for the injury sustained, unless the being there was unavoidable by reason of the horses being unmanageable. In this case it becomes the other party to give way, even if he has to take the *wrong side* of the road. If both parties are in fault *neither can recover*.

When carriages are going the same way, the foremost driver is required to turn to the left and allow the hind one to pass him on the right, if driving faster than he is.

This law is too often disregarded, and in

fact, I suspect is not generally known. It would seem as if common politeness ought to be sufficient to enforce the practice, did we not have such abundant evidence to the contrary in our experience.

The law also requires that we should not stop our teams in the *middle* of the road, which is designed for travelling purposes only. We have no right to obstruct it. These are the principal provisions of the law respecting travelled highways. K. O.

Broad Brook, Ct., 1868.

REMARKS.—We cannot endorse the advice of our correspondent against submitting disputes and controversies to arbitration. Judges and juries are liable to err as well as referees, and we believe that it is far better for neighbors to adjust their differences among themselves than to incur the expense and delay of a law-suit.

THE DEVONS.

This beautiful race has been considered, by some authors, aboriginal, and are claimed to have been known in England at the time of its invasion by the Romans. It is certain that their fineness of limb, uniformity of color, delicacy of proportion, and depth of breeding, give them claims to a distinction which no other race of English cattle exhibit; and be the fact of their remote origin as it may, there is no necessity of disputing it, or speculating on other probabilities. They are like no others, and by no intermixture of any other known breeds have they been, or can they be produced.

In what degrees of excellence the Devons existed during past centuries, we are unable to say; but that they possessed valuable qualities which endeared them strongly to the people who bred them is certain. Great attention has been paid to their improvement during a century past, and probably not neglected for centuries before. Not a single infusion of the blood of other known cattle can be detected in them, and for their improvement, as Devons, none other can be devised. In the good judgment, sagacity, skill, care, and pains-taking of their breeders alone, must be sought the means by which they stand in their present condition of excellence and beauty.

Description.

The head—lean in flesh, is rather short, the forehead broad, the face slightly dishing, and tapering gracefully to a fine, clean *yellow* muzzle. The eye—bright, prominent, and surrounded by a ring of orange colored, or yellow skin. The horn—upright, and curving outward, cream colored, black at the tips, graceful in its setting, and rather long, for the size of the animal. The ear—well set, and lively in action. The neck—on a level (in the bull slightly arching) with the head and shoulders; full at its junction with the breast, clean, and without dewlap. The shoulders—fine, open, (somewhat slanting, like those of the horse,) and on a level with the back. The neck-vein—full, and smooth. The arm—delicate, and the leg below the knee, small, terminating in a clean, dull brown, and somewhat striped hoof The brisket—full, and projecting well forward. The crops—well filled, and even with the shoulders. The back—straight from the shoulders to the tail. The ribs—springing out roundly from the back, and running low down, to enclose a full chest, and setting well back towards the hips, giving a snug, neat belly. The flanks—full, and low. The hips—wide, and level with the back. The loin—full, and level. The thigh—well fleshed and full, the lower part somewhat thin, and gracefully tapering to the hock; the leg below, small, flat, and sinewy. The twist—(the space between the thighs) well let down, and open. The tail—taper, like a drum stick, and terminating with a brush of *white* hair. The color—invariably a cherry red, sometimes showing a lighter, or deeper shade, and the skin, under the hair, a rich cream color. The bull, of course, will show the stronger and masculine character of his sex, while the ox will develop the finer points of his condition, and the cow, all the delicacy and refinement belonging to her race.

In the roundness, and fulness which accompany the proper development of the points named, the silky, wavy laying of the hair, and the elastic touch of the flesh, as the finger is pressed upon it, every beholder will at once see, in appearance, a most bloodlike and graceful animal.

In size, the Devon is medium, compared with our native cattle. A well grown ox, in good working condition, will range from 1400 to 1600 pounds, live weight. The bull from 1000 to 1200, and the cow from 800 to 1000 pounds. They sometimes exceed the heaviest of these weights, but such are the average. Fatted to a high degree, they will, of course, weigh heavier. In size, it is said, in England, that they are larger than they were a hundred years ago, before the attention of their breeders was thoroughly attracted to their improvement. From time immemorial they were chiefly bred in the northerly part of Devonshire, (and thus called North Devons,) one of the southwestern counties, in a mild climate, abounding in good pasturage. They have since spread into the adjoining counties, and many years ago, (within the present century,) were taken into the higher county of Norfolk, on the Eastern Coast, by the late Earl of Leicester, (then the noted Mr. Coke, of Holkham, a distinguished farmer, and landed proprietor,) as he considered them eminently fitted for grazing on the light sandy soil of his estates. They are now bred in many other counties of England, and are decided favorites

on hilly soils, where their lighter weights and activity in movement are better adapted to grazing and labor than the more sluggish cattle of the heavier breeds.

As a Dairy Cow,

The Devon may be called *medium*, in the quantity of milk she yields, and in its quality, superior. The older, or unimproved race, were somewhat noted for the quantities of milk they produced, as well as its good quality. A gallon of Devon milk yielded more butter than that of almost any other breed, as it does now, except the Alderney. But the improvers, in the attainment of a finer form, and heavier substance in their animals, perhaps sacrificed somewhat of the quantity of milk, for the more liberal development of flesh, well knowing that both flesh and milk could not thrive equally *together* in the same animal; although, when the milk ceased, the flesh came on with due rapidity, under generous feed. Yet, with an eye to breeding her solely for milk, she is well fitted for a dairy cow. Docile in temper, easy of keep, placable in disposition, she is readily managed. Her udder is soft, tidy in shape, with thin, silky hair upon it, clean, taper teats, easily drawn, and every way satisfactory to her keeper.

We have kept thoroughbred Devons thirty-four years—sometimes as high as twenty-five or thirty (not all milk cows) in number. Many of them have been excellent milkers, and some of them extraordinary, *for their size.* We once had two three-year old heifers, with their first calves, which gave for some three months after calving, on pasture only, with steady milking, an average of eighteen quarts per day; and from cows which we have at different times sold to go to other States, the accounts of their milk have been equally good. It is but fair to say, however, that after we commenced crossing our cows with bulls of later importations, some fifteen years after the commencement of the herd, the large milkers were not so numerous, although the cattle from these crosses were somewhat finer. The bulls we used were apparently bred from stocks highly improved, with an effort more to develop their feeding properties, than for the dairy. After all, our Devons yielded, on an average, quite as much as any *common* cows we ever kept, with much less consumption of forage.

With all her alleged deficiencies, the Devon possesses the *inherent* qualities of a good milker. Her dairy faculties may be bred out of her by neglect of that important item, and with a view to give her an earlier maturity, and more weight of flesh; but even under that system, she will occasionally persist, as we have known in various instances, in giving a large flow of milk, exceeding many common cows of equal size. On the whole, from the accumulated accounts we have received from time to time, coupled with our own experience, we pronounce the Devons, as a race, *when bred with an eye to the development of the dairy quality*, considering their size, and consumption of food, good dairy cows, both in the quantity of milk they give, and the butter it yields.

As a Working Ox.

In this valuable quality, no animal of the same size and weight equals the Devon—for the following reasons: They are, among cattle, what the "thoroughbred" is among horses. According to their size, they combine more fineness of bone, more muscular power, more intelligence, activity, and "bottom," than any other breed. They have the slanting shoulder of the horse, better fitted to receive the yoke, and carry it easier to themselves than any others, except the Herefords.

With all workers of oxen, the nearer a beast approaches in shape, appearance, and action to the Devon, the more valuable he is considered, *according to weight.* For ordinary farm labor, either at the plough, the wagon, or the cart, he is equal to all common duties, and on the road his speed and endurance is unrivalled.

Their uniformity in style, shape, and color, render them easily matched, and their activity in movement, particularly on rough and hilly grounds, give them, for farm labor, almost equal value to the horse, with easier keep, cheaper food, and less care. The presence of a well-conditioned yoke of Devon cattle in the market-place at once attests their value, and twenty-five to fifty dollars, and even more, in price over others of the common stock, are freely given by the purchaser.

As a Beef Animal,

We must place the Devon in the first class, for fineness of flesh and delicacy of flavor. Its compact bone gives it the one, and its rapid and thorough development under good feeding gives it the other. In growth and size it matures early, equal to the short-horn, and its meat is finer grained, juicy, and nicely *marbled*, (the lean and fat intermixed.) In the London markets, Devon beef bears the highest price of any, except the Highland Scot—usually a penny a pound over that of larger breeds, and our American butchers quickly pick the Devons from a drove, when they can find them, before most others. They feed well, take on flesh rapidly, and in the quality of their flesh, are all that can be desired.—*Allen's American Cattle.*

LINCOLN SHEEP.

The following notice of a late importation of this English breed, belonging to Hon. Samuel Campbell, of Oneida, N. Y., is copied from the editorial correspondence of the *Journal of Agriculture*:—

We were much interested in viewing Mr. Campbell's Lincoln sheep. The original stock of these

were imported by him from Lincolnshire, England, about two years ago. He has forty-five now. Two have been sold for $300, and one, a buck, was sold to a long-wool breeder in Canada for $120, in gold. The weight of the bucks is about 340 lbs., and the ewes 250 pounds each. Weight of fleeces: bucks, 15¾ and 17¾ pounds; ewes about 12 pounds each. The wool is very long, 12 to 15 inches, and sometimes even 20 inches in length, it is said. It is wavy, silky, and a remarkably fine specimen of luster wool. These are probably the only Lincolnshire sheep in this country. They are peculiar, and we judge that for mutton and combing wool they are the most desirable of any.

JERUSALEM ARTICHOKE.

This root possesses a high value for stock feeding. Upon its introduction into this country, it was called the "Canada Potato," and is so called by some aged people to this day. It was also known by the name of "Virginia Potato." It has ever been regarded as a sanative production, possessing considerable alimentary powers, and as a prolific bearer. Its flavor is mild and agreeable, but it is not, like the potato, dry and "mealy" when cooked, but solid and "soggy." Most domestic animals are remarkably fond of it, and prefer it, occasionally, to all other roots, and even to grain. The yield of the artichoke has been estimated as high as a thousand bushels per acre, on good soil, and is said frequently to have exceeded it by several hundred bushels.

In some sections, the artichoke is had recourse to for stocking pastures, in which swine are confined, and for this purpose is said, by those who have experimented carefully with it, to possess a high value.

We do not know that any one in this section has as yet given much attention to its cultivation; but we incline to the opinion that it will ultimately become a favorite production, —particularly as a food for stock. We have sometimes grown it in the garden, and have been surprised by its wonderful hardihood and remarkable power of prolification. It requires a rich, warm and mellow soil, and when once planted, no fresh seeding of the land will be needed for years,—the small tubers remaining in the earth, after digging the larger ones, being amply sufficient to make it propagate itself, without any further care of the producer.

From certain indications, we are inclined to the opinion that the potato plague has reached its limit, and hereafter we are to have a return of sound crops of that most useful vegetable; but should the limit of the disease not have been reached—and the evil still continue to develop itself—the artichoke will furnish one of the most valuable substitutes, and be no doubt competent to supply, in a considerable degree, the loss of so important a vegetable.

There is one characteristic appertaining to the Jerusalem artichoke which may be regarded as an important commendation. It is not, like the potato, injured by shade, but flourishes almost with the same vigor in orchards as in localities where it is favored with the direct influences of the solar rays. The tops, also, are far more valuable than those of the potato, and if fed to milch cows in seasons when the herbage of the pastures is short and unsucculent, will induce a copious flow of excellent milk. They possess a pleasant aromatic flavor, which renders them highly palatable to the animals, and are sanitary and stimulating in their effects. We suggest an experiment with them by many of our farmers,—but in a small way at first.

IMPROVED KENTUCKY SHEEP.

The best mutton at Faneuil Hall Market is from Kentucky. Within a few years past the supply from that source has largely increased. Messrs. Geo. W. Hollis and Dan Brown, the leading dealers in Kentucky sheep, and who keep buyers constantly in that State, estimate that their receipts of Kentucky sheep at this market is at the rate of $12,000 per year. The fine appearance of these sheep, both on the hoof and on the hooks, has led us to inquire into the history of a class of animals which give such great satisfaction to both producer and consumer. In the last Report from the Agricultural Department, we find the following detailed statement of the course of crossing and breeding which has been pursued for over thirty years by Robert W. Scott, of Frankfort, by which he claims to have established a race, known as the "Improved Kentucky," which have been widely diffused, and are essentially alike and uniform, and maintain their identity and impart their qualities as surely as sheep of any other breed.

In the beginning, about thirty ewes were selected from a flock of unimproved common sheep, and they were bred to a very large and fine Saxony or Merino ram; the object being to give in the offspring, more thickness to the fleece and more fineness to the fibre of the wool. This step was thought advisable before

uniting the coarse fleeces of the native sheep with the coarse and still more open fleeces of the large imported varieties, and the effect was satisfactory. The ewe lambs of this cross were bred on the first of October, after they were one year old, to an imported Bakewell buck, of large, full, round carcass, and a heavy fleece of long wool. The ewe lambs of this latter cross were also, in due time, bred to an imported Southdown buck, of large size and high form; the object now being to infuse into the progeny that active, sprightly, and thrifty disposition, and highly flavored and beautifully marbled mutton, for which the Southdowns are so justly celebrated. This object was also successfully obtained. The wethers of this cross were the delight of the epicure, while the value of the fleece was not diminished; as much being gained by increasing the number of fibres to the square inch as was lost in the length of them.

The next cross was made by a ram which possessed, in combination, many of the good qualities which it was desired to perpetuate in the flock. He was three-fourths Cotswold, and one-fourth Southdown—a large, hardy, active sheep, with a thick and heavy fleece, and his progeny possessed the same qualities in an eminent degree. The two next crosses were made by pure-blood Cotswolds; and the next by a very fine full-blood Oxfordshire ram, of remarkable softness and silkiness of fleece. They were all animals with short necks, round barrels, broad backs, and full briskets. They added to the flock still more weight of carcass and fleece; while the texture of the latter and the delicate flavor of the former were not perceptibly impaired, and therefore, in the next fall — of 1853 — the flock was divided between two fine full-blood Cotswolds.

Every one of these crosses was perceptible in the flock, (blended, but still manifest,) in the character and habits, as well as in the carcass and in the fleece; but in some a particular cross predominated, which was naturally to be expected, on account of the recentness of the improvement. In order to obliterate these discrepancies, and to produce complete uniformity in the flock, it was bred, in 1854, to five select rams of my own breeding. The progeny showed a reasonable accomplishment of the object; and, though there was some variation in their carcasses and fleeces, still they were in all respects beautiful and valvable animals of their kind.

In the fall of 1855, in order to carry out the same design, I bred chiefly to a mixed ram, whose pedigree showed Cotswold, Oxfordshire, Teeswater, and South Down blood. He was a highly formed and finely finished sheep, of large size and a thick fleece, of medium length and fineness of fibre, and his lambs possessed great beauty and value.

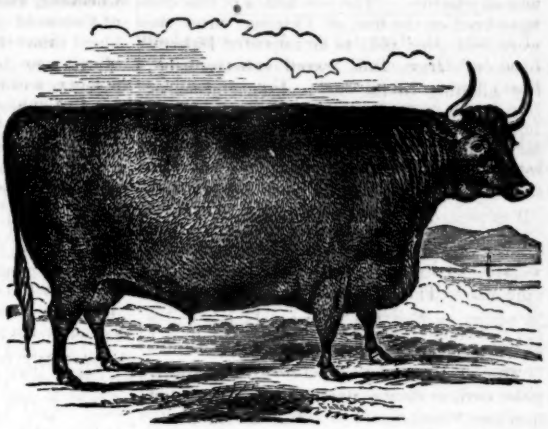
In 1856 I bred chiefly to a large and fine Cotswold, and in 1857 to him and to a ram of mixed blood, the ewes being so selected and bred as to produce a more complete uniformity in the progeny — those having a predominance of South Down and Merino being bred to the Cotswold, and those having a predominance of Cotswold qualities being bred to the mixed-blood ram. In 1858 two large and fine rams of my own breeding were used in the same manner, and for the same objects chiefly, viz: to give uniformity and stability to the flock. A few ewes were also bred, in 1858, to a very fine mixed-blood ram, which was a perfect model of symmetry, and which had taken a premium at the State fair, in Louisville, in that year. In October, 1859, the flock of about one hundred ewes was again selected, and bred with a view to the same object, about one-half being bred to the the above premium animal, and the remainder to a fine "Improved Kentucky" sheep, which had a fleece of remarkable length, fineness of fibre, and was of good size and fine form.

Since 1860 well-selected rams of my own breeding, and those of Leicester and of Cotswold blood, have been used in such manner as to impart some valuable qualities either to the fleece or the carcass, or to the constitution of the progeny; pure Cotswolds, superior in form and size and fleece, being raised in 1865 and 1866.

Mr. Scott says that these sheep have always faced the bleakest winters, wettest springs, and dryest summers, without any protection, and seem at all times comfortable and sprightly, being clothed to the ears and knees by a thick, long fleece. He has rarely failed to raise as many lambs as ewes, and in small flock one-third more. His flock of over 100 breeding ewes have averaged over eight pounds per head of merchantable, unwashed wool. It has generally commanded from three to five cents per lb. more than the ordinary wool of that section. A manufacturer of Louisville says, "It seems to have a length, strength, and texture, and at the same time, firmness, fineness, and softness of staple, which render it peculiarly adapted to southern and western manufacture and wear."

—Sir David Brewster has published a description of the manner in which a stack of hay was struck by lightning in Forfarshire, Eng. It was on fire but was extinguished before much of it had been consumed. On examining the stack, a circular passage was observed which extended to the bottom, and terminated in a hole in the ground. In the hole was found a foreign substance which proved to be silex, obviously formed by the fusion of the silex contained in the outer coating of the hay. It had a greenish tinge, and contained burnt portions of the hay.

THE NORTH DEVON CATTLE.



We copy this month from Mr. L. F. Allen's "American Cattle" a cut of a prize stall fed, four-year-old Devon steer. As this race is particularly popular at Brighton market as working oxen, we should like to give an illustration of some of the nicely matched pairs that have been sold there within the last year, but have not seen any cut that does the Devons justice in only fair working order. The engraving, however, is a beautiful illustration of them as beef animals.

The history of this race is interesting to New England farmers from the fact that many ascribe the acknowledged excellences of our "native stock" to their supposed descent from the Devons. In a brief history of this race which accompanies his American Devon Herd Book, Mr. Sessions says that "the descendants of the first cattle imported into New England, in the spring of 1623, show by their color that they were Devons or Devon grades." And Mr. Allen also says, "there is little doubt, from the appearance of many of the New England cattle, of the last and present centuries, that some Devons, in their purity, were early brought into Massachusetts. Traditional tales of their neat-limbed, sprightly, red, high-horned cattle have existed, and that they sprung from a Devon cross is beyond a question." We publish on another page some extracts from Mr. Allen's history of the Devon race of cattle, copied from his late excellent work on American cattle.

LARGE FARMS.

We, in New England, have very limited ideas of farming as carried on in some of the Western States.

A writer in the *Prairie Farmer*, Chicago, has been giving an account of a few of the farms which he has lately visited. One in Champaign County, called "Broadlands," contains 20,000 acres, or seven by six miles. This was owned by J. M. Sullivant, who wanted a bigger farm, and has sold it to John Alexander, and purchased one of 40,000 in Ford County. On the Broadlands farm there are this season 5000 acres in corn and a large quantity in oats. There are now 4000 head of cattle on the place—divided into *small* herds of 500 each. Many miles of hedge have been set. This is being extended every year.

Hickory Grove is the name of a farm of 26,000 acres in Benton County, Indiana. This is entirely prairie, except a magnificent hickory grove. A grove of twenty acres of poplar has been planted, and another of maples is to be planted. Thirteen thousand acres are under post and board fence, making forty-two miles. Seventy miles of Osage Orange hedge have been started on the place, and preparations are making for setting a large amount more next season. There are about 4000 head of cattle on this farm. They are divided into herds of from 500 to 700, and kept in pastures of from 2000 to 3000 acres. A part of them are herded outside of the enclosed portions in the daytime, and driven within for the night. Four years ago this farm was unbroken prairie. A farm adjoining the above contains 12,000 acres, and is devoted to stock raising, and another of 8000 is occupied in the same way.

In the Wabash Valley there are many farms from 1000 to 3000 acres, on which stock raising is carried on with eminent success. The

cattle are represented as in fine condition, and perfect health, and their sleek and glossy coats shine in the sun like silver.

FARMING IN GERMANY.—A correspondent of the *Iowa Homestead*, travelling in Germany, after alluding to the entire absence of fences and to the rows of shade or fruit trees on the highways, which give the traveller the impression of riding through a long and beautiful lawn, says:—"The fields of grain will compare well as regards size, with an ordinary city lot. Indeed, many of them are much smaller. Perhaps two by eight rods would be their average size. This, of course, refers to the fertile plains, where the entire surface is under cultivation, and not to the highlands that are approriated to raising timber, or to pasturage. Little corner stones mark the boundaries of these small farms and lots. Side by side, with only a deep furrow between, one sees there little patches of wheat, oats, barley, peas, potatoes, &c., which succeed each other in a regular course of rotation."

FALL SEEDING OF GRASS LAND.—The fact that timothy grass is naturally perpetual and self-sowing is used by the *Ohio Farmer* as an argument in favor of seeding down grass lands in September, which is the season that nature has appointed for the seed to fall, germinate and grow, and consequently the proper time for husbandmen to apply it to fields which are to be converted into pasture or mowing lands.

EXTRACTS AND REPLIES.

GARGET OR CAKED BAG.

I have seen in the FARMER many remedies for this disease among cows. I have adopted a treatment which I like better than any I ever saw in print. It has never failed with me, and others have tried it with the same result. It is very simple and safe. It is merely to give the cow beans once or twice a day until a cure is effected. In the early stages a few messes will be sufficient, of about half a pint at a time. They may be given either dry or green, with the same result. If green, a few hills of the vines and beans may be given, as cows will eat them most readily. I have tried the above several times the present season. It has been my remedy for several years, and always with good results. W. B. B.

Roxbury, Vt., Sept. 15, 1868.

REMARKS.—Before the above recommendation was in print we suppose it could not justly be called "book-farming." If it shall prove as efficacious with other farmers whose cows are troubled with garget, as it has with our Roxbury friend, he will receive many thanks for his communication. One of the exhibitors of thoroughbred Ayrshire cattle, at Burlington, Vt., claimed that that breed was entirely exempt from garget.

TRANSPLANTING SHADE TREES.

Please say something through the columns of the FARMER concerning the transplanting of shade trees (maple). Which is best, fall or spring? I would be glad to transplant this fall if as well, having more time for it than in the spring.

I have set out maples in my yard twice, and all have died but one which is now a nice tree in the dryest part of the yard. The soil is a rich loam, quite moist. How would it do to excavate the ground for the trees this month, filling the excavation with the soil removed, mixing in fine manure made in the barn-yard this season, and then transplant at the proper time this autumn? W. S. A.

Leicester, Vt., Sept., 1868.

REMARKS.—Shade trees of almost any size may be transplanted with much certainty of their living, if *proper care is observed in doing the work.* We have elms and white pines which we transplanted when they were from six to nine inches in diameter, and of proportionate height. Some of them are now nearly two feet in diameter and are forty feet high. They were transplanted eighteen years ago. These trees were dug about in November, had a heavy ball of earth—some two or three tons—left about their roots, and propped up with blocks of timber. When the base was frozen solid, the tree was removed on ox-sleds to the ample hole previously prepared for it, and set down. Just before dropping the tree into place, a cartload or two of rich garden soil, which had been placed in the barn cellar to prevent its freezing, was thrown into the hole and the tree let down upon it. When the tree was in proper position, all the vacant places about the roots were carefully filled with rich soil, and pressed under with a stick. A ton or two of stones were then placed upon the surface in order to prevent the tree from swaying in high winds, and thus disturbing the roots. When managed in this way, every tree set has grown well.

You state that *one* tree out of several that were set, lived and grew well. Is that not sufficiently evident that the fault was not in the soil? On the same soil where one tree would grow, any number would be quite likely to, if the trees were all equally good, and the treatment of them the same.

Success in transplanting depends, mainly, on the *manner in which the tree is taken up.* Most person suppose that if they preserve the large roots the tree will live. But it is the small fibrous roots which spring from the larger ones, and the bundles of little roots that usually cluster under the main stem of the tree, that go to work immediately and feed and sustain the tree. If these are torn off, badly broken, or their surfaces chafed, the tree has little or no means of immediate support, and will die.

It is much better to spend a good deal of time in taking up and setting six trees and have them all live, then to take up and set 12, hurriedly, and

lose one half of them. The work should be commenced farther from the stem than is usual. Find the extremity of a root, then trace it to the tree by digging under it, and saving all the smallest roots. When they are loosened, cover them with soil again to keep them from sun and wind.

The hole in which the tree is to be set should be amply large, and the soil loosened to the depth of a foot or 18 inches. The soil upon which the roots are spread out ought to be a good loam, and if mixed with a fine compost manure, so much the better. The drainage should be such that water will not remain long in the holes in which the trees are set.

The plan you suggest about excavating immediately is an excellent one. You can then transplant at any time after the leaves have fallen—perhaps November would be better than October.

TILE FOR COVERING ROOFS.

1. Are *Tile* used anywhere at the present time for covering roofs?
2. Of what dimensions are they usually made, and in what manner are they affixed to the roof?
3. What is the cost of them at the manufactory?
4. Are they burned like bricks, or baked like pottery ware?

A. N. TOWNSEND.

New Ipswich, N. H., 1868.

REMARKS.—We are always glad to notice inquiries going on tending to find some material for covering roofs which will be more permanent, and less costly in the beginning, than our perishable shingles. Anciently, clay was moulded into curious forms, in various parts of Europe, and used for covering roofs. The pieces were called "tile," were baked or dried in the sun, and were fastened to the roof with pins of oak. Many of the old churches, cathedrals, and other buildings were covered with them, and some are remaining to this day. We have never known them used in this country for covering roofs. They would probably be more expensive than the slate which is so abundant in our country, and which is so well adapted to the uses for which it is employed. Tile are also exceedingly heavy and necessitate large and expensive timbers to support them.

PICKLING CUCUMBERS.

My method for preserving cucumbers for pickles, which I think preferable to any that has been given in the FARMER in reply to the inquiry of your Subscriber in Shelburne, is as follows: For a barrel of cucumbers, say of thirty or thirty-two gallons, make a brine of five quarts of salt and five ounces of pulverized alum, with three or four pails of water. After preparing your cucumbers, put them in, adding water if required so as to keep them under the brine with a follower on top of the pickles. This method will be found to be much the best. It saves salt as well as labor in freshening or preparing them for vinegar, and it preserves them fresh and sound; better, I think, than it does to saturate them with salt. LORENZO J. DAY.

Bristol, Vt., Aug. 22, 1868.

REMARKS —One of the West Cambridge market gardeners informs us that in preserving cucumbers for market pickles he uses less than a peck, but more than half a peck of salt to a barrel of cucumbers. The salt is added, with a little cold water, as the cucumbers are put into the cask. Thus salted they will keep a long time. Before putting them into vinegar they are freshened and "greened" by being kept several days in water, changed once a day, when they are put into vinegar.

CANCER IN A COW'S EYE.

I asked a few weeks since what I should do for a cow that I feared had a cancer in her eye. You expressed a hope that it was not cancerous and wished for a more particular statement of the case. Sometime last January I noticed that the eye was constantly weeping. The discharge continued and increased until the eye has entirely disappeared, leaving the whole socket an unsightly sore.

East Jay, Me., Sept. 1, 1868. JACK.

REMARKS.—We now think it probable that the disease in the cow's eye is cancerous, in which case remedies will do little good. A strong solution of alum applied to the ulcerated surface may be useful. Powdered bloodroot and iodide of potassium are recommended by Dr. Dadd. The following fatal case was reported by an English Veterinarian, and shows that in animals, as well as in human subjects, the cancer is a most malignant disease, and one over which we have but little control. He says:—"On examination we perceived a cauliflower excrescence growing from the membrana nictitans, [the inside "winker"] about the size of a strawberry, from which issued an ichorous discharge that excoriated the adjacent parts, and which bled on the slightest touch. We at once decided upon taking it out, and this was accordingly done, the parts being subsequently touched with argent. nitrat. After this, the cow appeared to go on well for about twelve months, without any re-appearance of the cancerous growth. At the conclusion of that time, we were again sent for, and found the cornea had become of a bottle-green color, and that the sight of the eye was completely gone. About three months after this, a fungoid growth sprouted from the cornea, which, increased in size very rapidly, but was repressed by the application of a little burnt alum. Shortly after this, the eye receded considerably into the socket, and eventually it sloughed entirely away. Some weeks afterwards, she became partially paralyzed, and was unable to masticate. The lower lip was pendulous; the ear hung down by the side of the neck on the affected side; difficulty of deglutition was experienced, and the saliva flowed from the mouth, mingled with the partially masticated food. Attenuation of the paralyzed muscles quickly followed, and much general emaciation of the frame. The animal was then killed, to avoid a more lingering and painful death."

PEAR SHAPED APPLES.

I send you a curiosity worth noticing,—a pear and apple growing on the same twig. They grew in the orchard of N. O. Phelps of this town. The tree on which they grew is an apple tree of the

Sopsovine, grafted by Mr. Phelps; and there is no pear tree in the same orchard, and none nearer than the other side of the street. We have other specimens at the store of Mr. Pike, where any one can see them if they wish. There are several of the same sort on two trees. Now, Mr. Editors, can you or some of your learned contributors explain the philosophy of this uncommon occurrence. I have one specimen where there are three in one cluster, two apples and one pear. Mr. Phelps has tasted those of the pear shape, and says that the pear is pear flavor and not apple.

P. S. Since writing the above I have cut one of the pears, and it cuts, looks, and tastes more like pear than apple. Z. E. WOODBURY.

Groton, N. H., Aug. 31, 1868.

REMARKS.—We have also received from O. H. Vaughan, Esq., proprietor of the *Laconia Democrat*, specimens similar to those above described, which grew on a limb of a Sops of Wine tree, of one of Mr. Vaughan's neighbors, in Laconia, N. H. There were pear trees within a few feet of the apple tree, but not near enough for the limbs to intermingle.

Wishing to obtain the opinion of pomologists as to the probability of the apple blossom being impregnated by bees or otherwise from the pear trees in the neighborhood, we submitted the specimens to the fruit committee of the Massachusetts Horticultural society, and they were placed on exhibition at their rooms in Horticultural Hall, where they attracted considerable attention. Col. Marshall P. Wilder, Charles M. Hovey and other experienced pomologists, regarded it as a mere freak of the apple,—a sport neither very common nor very rare,—and not the result of impregnation, which they regard as impossible. Keith's Botanical Lexicon was referred to for the assertion that "no one has ever yet succeeded in fertilizing the apple with the pollen of the pear, or the gooseberry with the pollen of the currant," which opinion is also confirmed by Wilson's Cyclopædia. Mr. J. Breck, however, was disposed to admit the possibility of impregnation. The Horticultural committee do not agree with our correspondent as to the pear taste of the pyriform apple, as they thought it had none of the peculiar flavor of the pear.

A BLIND COW.

I have a cow that has become blind. I know of no cause for it unless it may have been caused by lightning. The cow went out apparently all right in the morning and came home blind at night. She has every indication of perfect health, save the loss of her sight. Can I do anything for her?

D. M. HODGE.

Grafton, N. H., Aug. 28, 1868.

REMARKS.—If the blindness is caused by lightning, we should expect that the nerves of sight would gradually recover their natural functions. The causes generally assigned for occasional blindness in cattle, such as congestion, tumors or water on the brain, afford little hope for successful treatment. An English writer, Mr. Percival, says blindness may proceed from some disease of the retina, or from some abnormal condition of the optic nerve or brain; or it may prove the last link of a series of morbid phenomena, originating in some remote part of the body, operating sympathetically on the nervous system, and through it, extending to the eye. If there is no obvious improvement within a few weeks, the butcher will aid you to dispose of the cow.

SPECKLED AND STRIPED BUTTER.

In the FARMER of August 22, I find an article on White Specks in Butter. It is asked, "Did any one ever keep spotted butter in a cool place twenty-four hours, then work it till it was waxy, and find any white specks in it? Now if there are white specks in butter they were there when churned, and no amount of working will entirely free the butter from them. I, for one, do not wish you or your many readers to think that we dairy women, of twelve or fourteen years' experience, do not know the cause of and remedy for striped butter. Butter should never be worked with the hands. The salt should be thoroughly worked in with a ladle, and after standing twenty-four hours in a cool place worked with a butter-worker until free from buttermilk, and then packed, using a pestle to pound it down, and a ladle to smooth the top of the tub. If this is done, there will be no striped butter, though at times there may be white specks in it, the cause of which we dairy women are not agreed upon. SUE.

Royalton, Vt., Sept. 14, 1868.

A HORSE BLEEDING AT THE NOSE.

I have a five-year-old horse that occasionally bleeds at the nose. The blood will flow from the nostrils almost as freely as from a stuck pig, until the horse falls to the ground from weakness, and the flow of blood will cease, apparently because it is all out of his body. After resting a while he will get up and gradually gain strength, until from exercise or otherwise, another bleeding spell occurs. What shall I do for him? JACK.

East Jay, Me., Sept. 1, 1868.

REMARKS.—Give the horse a teaspoonful of oil of vitriol in a pail of water three times a day. It is possible that there is a polypus growing in the nostril, which is the source of the bleeding.

BEST BREEDS OF SHEEP FOR COMBING WOOL.

What variety or breed of sheep is best and most profitable for combing wool? Is the best breed for this purpose good to raise lambs from for market?

ONE INTERESTED.

North Boscawen, N. H., Sept. 19, 1868.

REMARKS.—The English sheep of the Lincolnshire, Leicestershire and Cotswold races, such as are bred in Canada, and such as are being rapidly introduced into various parts of this country, possess in perfection the necessary qualities for producing combing wool, which Mr. Hayes, secretary of the National Wool Growers' Association of Manufacturers, says should "be long in staple—from four to seven inches in length—comparatively coarse, having few spiral curls and serratures, and possessing a distinct lustre." Most of these long wool breeds are also celebrated for their excellence in the production of "lamb" and mutton. Mr. Spooner, an English writer, in his work on sheep, seems to give the preference to the Cotswold, which he says is "a large breed of sheep,

with a long and abundant fleece, and the ewes are very prolific and good nurses. The wethers are now sometimes fattened at fourteen months old, when they weigh from fifteen to twenty-four pounds per quarter, and at two years old increase to twenty or thirty pounds. The wool is strong, mellow, and of good color, though rather coarse, six to eight inches in length, and from seven to eight pounds per fleece." The earliest and largest lambs at Brighton market are from the long-wooled English sheep, and the supply of their wool is far below the demand of our manufacturers.

BRICK AND STRAW OF AGRICULTURAL PAPERS.

Every man to a very great extent is what he is made by surrounding circumstances. If a child from its earliest infancy could be kept free from all untoward influences, he would almost invariably grow up to manhood with refined manners and correct moral habits. On the contrary, if the child is surrounded by adverse influences, and grows up under them to mature years, he will as invariably form evil and corrupt habits, which will cling to him through life. It is impossible to avoid the influence of associations. The same is true of our agricultural papers. The editor cannot make "brick without straw." His paper will be good, bad, or indifferent according as those who take and read it, furnish the material out of which it is to be made; and a large part of this material should consist of carefully studied and well written articles for its columns, containing the practice and experience of all its readers. Without liberal patronage, no editor can long furnish a first class agricultural paper, and without reading such a paper no one will be as good a farmer as with it. The agricultural paper is to the farmer what the political paper is to the politician. It seeks to promote his best interests, and to advance him to a higher plain of experience in his chosen pursuit. Enclosed please find five dollars for myself and a new subscriber. T. L. HART.

West Cornwall, Ct., Sept. 15, 1868.

REMARKS.—Although the correspondence of the NEW ENGLAND FARMER has been unusually well sustained during the late busy season, by its intelligent readers, yet we would remind one and all that if they wish its columns to be still more instructive and interesting, they must improve "each shining hour" of the approaching long evenings by dotting down the facts which have arrested their attention, and the thoughts which have passed through their minds, while at work in their fields, or while comparing the present with the past. Has not each one learned something new by his experience of the backward wet spring, the hot, dry summer, and the pleasant fall, through which he has watched and tended his crops? We do not ask for formal essays. Give us the stray facts and hints of your experience.

P. S.—The publishers suggest that friend Hart has shown in a most practical manner, one *sure* method in which subscribers may aid in improving their paper. Were each of our readers to send a new name with his own, when renewing his subscription we should soon have a circulation unequalled by any weekly paper in New England. The close of the political campaign will give them an excellent opportunity to enlist new members for the ranks of our agricultural corps.

TOP-DRESSING GRASS LAND.

If "Subscriber" of Sabatus, Me., will study he examples of top-dressing to be found upon his and every other farm, he may learn more of the effects of manure applied to grass land than "Early Cut" can tell him. He will find the manure dropped by his stock upon the grass and dried in the sun and wind has produced little apparent improvement of the grass, but that it has become an impediment to the scythe and rake. He will find other places in his field where the water has carried upon the grass, sand, gravel, and a mixture of unknown materials, with no resemblance to stable-manure, that has greatly improved the crop.

It is useless to think of raising herdsgrass on any field that does not contain the roots of that grass, unless the seed is sown. I would not top-dress land that is not well stocked with such grass as we wish to produce. Other fields that are smooth enough to plough well might be turned over in the fall, and a quantity of fine manure harrowed into the soil with redtop or herdsgrass seed, or both, with encouragement for a good crop of hay the next season. In that way the land may constantly be kept in grass. The high price of labor, and the facility of procuring grain has induced many to keep their land in grass as above described.

The amount of manure to the acre should be as much as our liberality will allow. A little is good, we seldom apply too much. For top-dressing, the manure should be fine, and applied at such time as will enable it to reach the roots of the grass the quickest;—just before the fall rains (for we must have water to carry the plant-food to the roots) or in the early spring. The latter season is objectionable because the ground is too soft to drive the team over it without injury to the field.

Water is the best and cheapest manure we have, and in a thousand places upon our sterile hill-sides it might be used for fertilizing purposes. Now is a good time to turn the water from the springy wet places where it is pent up, destroying all good grass, to the dry fields upon a lower level, to the great improvement of both. There are many small streams that with a little engineering and labor may be turned from their usual channels and made to water dry, and now unfertile fields. I can think of no way the same improvement can be made with the same money as by judiciously using the water upon our hills. EARLY CUT.

Mast Yard, N. H., Sept. 14, 1868.

AGRICULTURAL ITEMS.

—The Louisiana rice crop will amount to 60,000 barrels, it is thought—the heaviest crop by far ever yet raised in the State.

—At a late discussion by the Illinois Horticultural Society, many reported an unfavorable experience in raising blackberries.

—There are 7,580,000 sheep in Ohio, 1,481,214 cattle and 2,100,000 hogs. The corn crop this year is estimated at 141,000,000 bushels.

—Near Manchester, Mich., is a hop yard of forty acres. Its manager says it cost twenty-five cents per pound to grow hops and put them in bales, ready for market.

—Milch cows in the vicinity of Newport, Ky., are going blind. Not less than fifty of them have

entirely lost their sight, and it is accounted for by the fact that during the warm weather they would stand in the water, and that the reflection of the sun on the water affected their sight to such an extent as to cause it to be ultimately lost.

—The late warm weather, rain and moist atmosphere, is said to have had a disastrous effect on the portion of hops not previously picked. Prices, however, remain unchanged,—15 to 25c. per lb.

Grapes are said to do best when planted among rocks, because the best of the sun is retained and radiated in the night, giving an equable temperature.

—The Illinois Industrial University commences its first academic year with about eighty scholars, nearly the same number as attended the preliminary term last spring. There is a full *corps* of efficient professors and teachers on duty.

—The Freshmen Class in Dartmouth College numbers about eighty. Five have joined the upper classes, nineteen the scientific department, and the agricultural department, just instituted, opens with a class of ten or twelve.

—To keep dust from cream, take rattans and make hoops a little larger than the pans—stretch thin muslin across, thin enough to admit some air, but not flies and mites. Cover the milk with these *as soon as it is cool*, and they will prove of great value.

—Wool is so cheap and old sheep so plentiful on the River Plate, South America, that many sheep are being "tried out" for grease. As they can be bought at from twenty-five cents to a dollar per head, it makes a very good business at the present time, yielding something like 100 per cent. profit.

—The *Country Gentleman* discusses at length the importance of simple farm machinery, giving instances where complex machinery, although working well when in good order, failed to come into general use simply on account of its cumbersome character.

—The dry weather at the West has affected the hop crop adversely in some sections, especially in Wisconsin, inducing the belief that the yield in that State will not exceed that of last year. The aspects in Michigan are more favorable, while in this and the Eastern States a large yield is anticipated. The picking season, it is supposed, will be two weeks earlier this year than it was the last.

—A new cheese hoop has been introduced among the dairymen in the Eastern section of New York. It is made of metal and has a malleable iron clasp or lock which, when opened with a key, lets the hoop free from cheese and follower at once. These hoops greatly facilitate the labor of handling cheese, a point of considerable consequence in a large dairy.

—In one of the milk dairies near London, England, the cows in full milk each get 13 pounds of hay, 76 pounds of mangolds, two pounds of meal and two pounds of cake per day. Distillery wash is thought to be the most productive of milk of any food, but its use is not common. Distillers' grain is found to be much superior to brewers' grain. In an examination of over 60 cow houses, only one was found where the cow food was steamed or cooked, and in that the cooking was confined to the manufacture of a gruel to be thrown over uncooked food.

—The *Ohio Farmer* says the most rapid potato digging he ever witnessed was done with a common barn shovel. The shovel was driven into the earth beside and under the hill, and a portion lifted out, and by a quick jerk scattered over the surface, entirely separating soil and vegetables, leaving the potatoes clean. Generally two applications of the shovel finished the work upon a hill.

—A correspondent of the *Country Gentleman* is led to ask, does wheat bran diminish the quantity of milk when fed to cows? by the following facts: on the first of September, he commenced feeding two favorite cows on wheat bran, six weeks after their calves, (then five weeks old,) had been taken from them; and although the pasture has daily increased in richness since the removal of the calves, the flow of milk from these cows has greatly decreased in quantity.

—A plant thrives better where the air is "foul" with fertility. Malarious districts are often—and may we not say generally?—the richest. Afterwards, when cultivation has progressed, they are less fruitful, while the air is more healthy. It was in the carboniferous period that vegetation was the most luxuriant. The air, then, was highly charged with carbon, and with other matter deleterious to animal life, but favorable to vegetation.

—The *Prairie Farmer* speaks of the wide spread failure of the potato crop this year, from the amount of rain in the spring, the scarcity of it during the time when it was most needed for the growth of the potato, together with the ravages of insects heretofore unknown, or known only in small quantities, and urges greater care in the growth of this important vegetable. It recommends the ploughing of turf land this fall, which will only require to be gone over with the cultivator next spring to be ready for planting.

—The *Country Gentleman* publishes a lengthy article from its correspondent "F.," who occasionally contributes to our own columns, in explanation of the fact that a good crop of wheat no longer results in a large surplus and low prices. Among the reasons assigned are insect ravages, a greater variety of products, the growth of towns and cities, facilities of transportation, making a market for hay, vegetables, &c., decrease of production in old States, and an annual increase of population that requires an increase of production equal to five or six millions of bushels per year, &c.

STACKING HAY IN THE FIELD.

A correspondent of the *Country Gentleman* who was raised near the rivers Severn and Avon, gives the following plan for facilitating the business of haymaking adopted by farmers who own from 200 to 300 acres of meadow lying on those streams, and whose homesteads were often a mile or two away, and few of whom had more than one team:—

The mowing was commenced early, and proceeded with without any delay, and as fast as the hay became dry it was put in what they call "wind cocks," being about a ton or less in each cock, which were well made by a man building them as the others pitched the hay up to him. They were round and so well made that for a few weeks they were perfectly safe. Thus the work went merrily on, and in any damp parts of the fields the team would be in request to carry the crop from there to a sound and safe spot. Then, when all was mowed and made into hay, there was none but the regular constant men retained, probably only a couple of men and a boy, and these would then fetch home the whole of the cocks, and put them in large ricks in the stock-yard, where they would be thatched with straw according to the custom of the country. This is a plan which might be adopted in this country, where there is a great deal to be done and few hands to be employed, for a very few men would make perfectly safe in this way all that could be cut with two machines running from light till dark; for, with the aid of a tedder and some horse-rakes, the cocking would be nearly all to be done with those using the forks.

The Texas Cattle Fever.—John J. Keller, a veterinary surgeon of St. Louis, who is spoken of as a well educated and intelligent practitioner, attributes this disease to the generation of microscopical fungi or animals. He believes that they are in a state of incubation, whilst on, and when leaving the Texas cattle; that they are specifically attracted to our native cattle, and that they mature in and upon them, and ultimately (if not arrested in their course) destroy them by preying upon the vital parts of the blood, while these microscopical fungi or animals perish in their feast, and consequently cannot pass from one of our cattle to another. This idea, Dr. Keller believes is in accordance with what has been ascertained to have occurred amongst the fungi of the vegetable kingdom, and hence may safely be supposed to happen in the animal—both being so intimately allied.

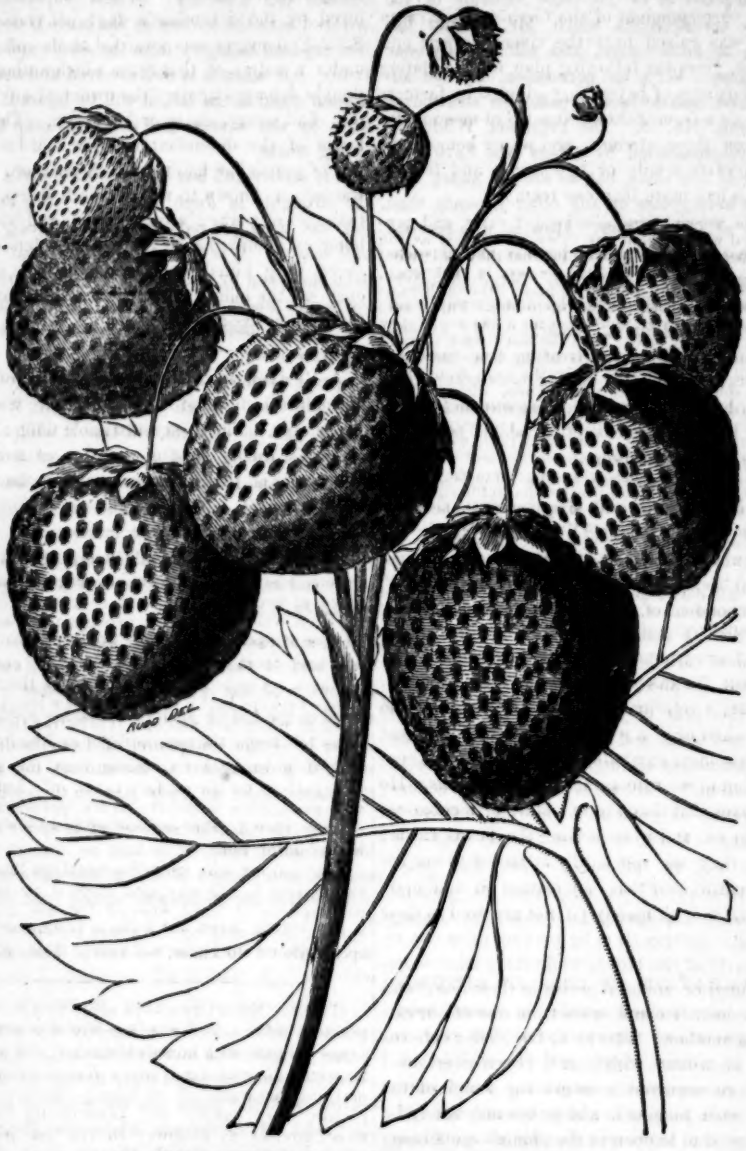
Dog *vs.* Sheep.—The *Vermont Record and Farmer* reports the case of H. N. Burnett *vs.* G. W. Ward, tried at the late session of the Windham County court. The plaintiff's evidence tended to show that seven of his sheep and one lamb were killed and others injured by the defendant's dog. A verdict of $202.50 damages was awarded to the plaintiff under a statute of that State which authorizes double damages against the owner of any dog that shall worry, chase or kill sheep. The attempt of the defendant to show that his dog was of peaceable habits and disposition, and was never known to worry or kill sheep, and that said dog was always at home, and was at home every day during the weeks defendant's sheep were killed, seems to have little influence on the minds of the jury, who assessed the damages as above stated.

A Remarkable Confession.—One of the agricultural editors of a New York city weekly paper says, "The most remarkable thing about Darwin's theory of the variation of animals and plants is, that it teaches us more than *we* knew before."

Sweet Cider.—To all lovers of this excellent and really healthy beverage, I have a piece of useful information to give. Cider, if taken when first made, brought to a boiling heat, and canned, precisely as fruit is canned, will keep from year to year without any change of taste. Canned up in this way in the fall, it may be kept half a dozen years or longer, as good as when first made. It is better that the cider be settled and poured off from the dregs, and when brought to boiling heat the scum that gathers on the surface taken off; but the only precaution necessary to the preservation of the cider is the sealing of it up air-tight when boiling hot.

Last fall my wife canned several gallons of sweet cider in this way, and kept it perfectly pure and sweet until opened for use in the spring, so in making the above statement, "I speak what I do know."—*North West. Far.*

Galled Shoulder.—In reply to a correspondent who asks for a remedy for a two-years old gall on a horse's shoulder, the veterinarian editor of the *Western Rural*, after remarking that a gall of such long standing will require very careful and persevering treatment, advises as follows: In the first place, you must dispense with the use of a collar. The following lotion should be applied daily to the sore:—Sulphate of zinc, one drachm; acetate of lead, one drachm; water, one pint. Where it is very difficult to dispense with the use of a collar, some of the stuffing may be removed from it, so as to make a hollow opposite to the sore part, which is thus relieved from pressure.



THE PRESIDENT WILDER STRAWBERRY.

This is a cross between La Constante and Hovey's Seedling, and is one of many thousand seedlings which Col. Wilder has grown during the past twenty years. The Fruit Committee of the Massachusetts Horticultural Society, who have seen it upon the grounds of its originator say, they "cannot doubt that it is hardy, vigorous, highly productive; of largest size, superior in quality, beautiful in appearance, firm enough for market purposes; and, should it sustain the character with other cultivators which its originator has obtained,

it will prove to be the most valuable of the many contributions which Mr. Wilder has made to horticulture, and will worthily bear his name. With his permission, we are authorized, and do hereby name his strawberry seedling, No. 13, 'The President Wilder.'" It is recommended by others who have seen the fruit and vines, but we are not aware that it has been grown on any other grounds than those of Col. Wilder. How it will succeed in other localities and under less skilful cultivation remains to be tested. Mr. J. M. Merrick who is satisfied that this new variety is all that is claimed for it, remarks:—My experience in purchasing and treating new varieties of strawberries, like that of most other amateurs, has been one of disappointment; and I have become very skeptical about new and highly praised seedlings.

In reply to a writer in the *Horticulturist* who is perplexed with sixty bearing varieties on his grounds, claimed by the originators as particularly excellent, and who asks the Pomological society to weed out the "suckers," a correspondent of the *Country Gentleman* says, "the Society need not trouble itself; these worthless varieties will weed themselves out. Let our perplexed friend make a memorandum this year of all the highly lauded and unproved sorts, and keep it five years, and he will find nearly all forgotten, and very few in cultivation." Still we hope President Wilder will prove as great an acquisition as Hovey's Seedling. But as it is not certain that any plants will be offered for sale this year, the question of its adaptation to general cultivation can hardly be decided the ensuing season.

PREPARATION OF SOIL IN AUTUMN.

We have noticed articles in several western agricultural papers, during the year, in favor of *winter* wheat; and recently we observe correspondents intimating that farmers are at work putting in a large breadth this fall. We are glad to observe this, for we are strong believers in winter wheat.

It is often said that it cannot be raised successfully where the soil is not permanently covered with snow in the winter; that on the prairies the winds blow the soil from the seed, and the freezing and thawing throws out the plants; and renders the crop uncertain. But early sowing with the drill or the plough will obviate this difficulty. Wheat superficially covered with the harrow or the brush is doubtless exposed to injury from the winds and the frosts, but when it is well covered and makes a good stand in the fall, it will be injured but little by the winter, and is a surer crop than spring wheat.

It is earlier and less liable to be injured by the droughts in June and July. We think this has been proved abundantly during the past season. It is the spring wheat that has been shrunken by the drought. The berry of the winter wheat was generally full and plump, and ripened before the dry weather deprived the straw of sap.

Spring sowing is apt to be delayed by the cold and wet. When this is the case, it will be late, and the drought will take it while the berry is forming, and it will be small and shrivelled, and it will be more liable to be attacked by insect enemies. The soil in August and September is warm and mellow, and the grain will germinate immediately, and not lie in the soil and rot, as it often does in the cold, wet lands in the spring.

These remarks are equally applicable to the East and to the West. We usually apply manure with the wheat crop, whether it is sowed in the fall or spring. Manure applied in the fall keeps the ground light and mellow, while it gives access to the sun and air, and the plants make an early start in the spring.

When spring grain is to be sowed on stubble, or after corn, it is best to spread the manure, and plough it in, in the fall, especially if it is not thoroughly rotted, and fine. In the spring, when the grain is to be sowed, the plough or cultivator will mix it intimately with the soil, and it will be, where it should be, in the seed bed, ready to nourish the springing plant. The frosts of winter crumble it, and prepare it to mix with the soil. Little or no fermentation takes place during the cold season, and the gases are not given off until the genial rays of the sun warm the ground, and then they are absorbed by the earth, and pervade the whole mass.

An idea has prevailed that manure applied in the fall loses its strength by the action of the rain and air. If it is covered three or four inches we think it loses but very little. The salts that are leached out by the rain are retained in the soil, and the convenience of ap-

plying in the fall more than offsets any loss of gases that may take place.

Top dressing to grass in the fall and winter may be applied with less injury from the wheels, and the treading of cattle and horses, than in the spring. And where the surface is tolerably level the loss from washing is very slight. Most farmers who make manure in the summer prefer to apply top dressing at this season, and find it efficacious in keeping up the grass crop.

In sod ploughing, if the soil is clay loam or a moist black soil, we prefer to turn it over to a good depth in the fall, and leave it exposed to the action of the weather during the winter. The soil that is brought up from a depth of nine or ten inches, in this way, is mellowed, and mixes better with the manure and the surface soil, in consequence of this exposure, and is ready for the plough or the harrow several days earlier in the spring. Owing to its position, the water drains from it sooner, and the air penetrates it more completely. If the soil is a light sandy loam, it is less important to plough in the fall. Such a soil being finer, may be worked into a good tilth at once, and may be sowed or planted immediately after it is ploughed.

Old grounds, that are infested with worms of any kind should be turned up late in the autumn, just before the frosts set in. This is a good practice, whatever the crop is to be. It is especially important for garden soils, that they should be ploughed or spaded deeply to expose the eggs and larvæ of insects to the weather; and if one has crude or uncomposted cattle or horse manure, it is well to work a good quantity into the garden soil late in the autumn. When a garden soil that has been thus treated in the fall is well stirred in the spring, and a good dressing of well rotted compost, or some commercial manure added, it will be in a condition to receive the seeds and plants at an early day, and to yield them the nutriment they require until their growth is perfected. It will also be in condition to receive a second crop after the first early crop has been removed, if this is desired. Thus the soil is fitted for its office during the whole season, and is always ready for use.

—Two pailfuls daily of flax seed tea has been found to be the most successful remedy for cattle attacked by the "Texas fever," yet tried at Chicago.

For the New England Farmer.

VERMONT FARMS AND FARMING.

An Essay read by Z. E. Jameson, of Irasburg, at the Wednesday Evening Session, (Sept. 9,) of the Farmers' Club, at the Court House in Burlington, during the late Fair of the State Agricultural Society in that city.

The subject is so comprehensive that it will be impossible to do more than glance at a few of its prominent points.

Vermont is emphatically an agricultural State. The first settlers endured great privations, and practiced the most rigid economy to obtain the means of a bare subsistence, in a land full of beauty in summer and autumn, and full of dreariness and desolation in winter and spring. In the seaboard States, the fisheries, the coasting voyages, the factories, and the foreign export trade enabled many a farmer to increase his income from purely agricultural pursuits, by other employments in the winter months; but the Vermonter had no other resources than his home farm. If untimely frosts or adverse seasons cut short his crops, it was true he could convert his wood into shingles for a neighbor's barn, into charcoal for the blacksmith, or into salts for the merchant.

As the years passed by, the pioneer's axe let the light in upon hills of rocks, hills of clay, hills of sand, and valleys of every variety of soil, from rock to the treacherous oozing mud, that our present ditches have transformed into fields of a fertility and depth that can no where be excelled.

Although the State may be hardly larger than a Western county, yet it has a marked variety of climate. The moving waters of the Connecticut on the East, and the beautiful lake on the West, mellow the northern blast and deadly frost, so that the season of flowers and fruit in some sheltered locations will compare favorably with a more southern clime. Even lake Memphremagog, lying at the border of our northern plains, as well as every river that finds its way from our mountains, serves to mitigate the severity of the seasons; so that many a valley farm enjoys, when compared with those on the surrounding hills, a comparatively mild climate. In these favored locations, the corn matures its yellow grain, the pear, grape, and even the peach ripen their fruits.

But not to deal with generalities alone, permit me to bring to your notice some unimaginative and unpoetical facts in regard to Vermont farming. As secretary of the Orleans County Agricultural Society, I issued a circular in the fall of 1867, to be filled by the School District Clerks, designed to exhibit a correct account of the products of the several farms in their respective districts, based on the estimates or positive knowledge of the farmers themselves.

Reports were received of 718 farms, in thir-

teen towns, but no town was entirely reported. On each of these farms there was an average of 32 acres of pasture, 23½ of mowing, and six acres of land in grain and hoed crops,—making 61½ acres of cleared land. The value of all the products of these farms averaged $841.60,—being $13.75 per acre. Besides which, these farms averaged a sugar orchard of 214 trees, yielding 490 pounds of sugar each.

But as the greatest part of these productions must be consumed upon the farm, only a small portion could be exchanged for money. The wool, the butter, a few oats and potatoes that we may suppose could be spared, may bring in a cash income of some $355, on each farm; which must pay the taxes, the doctor, the grocer; clothe the family, provide new and repair old farming tools of all descriptions, &c. It is evident, therefore, that there will be but a small sum remaining to invest in government bonds, or for sending the sons to college. Is this average of Orleans county less than the average income of other counties in the State? I will not admit that it is. Certainly, then, if there were no hope of rising above the average, farming must be considered an unprofitable vocation. But from my own door I can look on two farms that yield an average income of $2000, besides paying hired help and family expenses, and that without counting the forage that sustains the stock.

On one of these farms, there were raised 75 bushels wheat, 600 bushels oats, 700 bushels potatoes, 100 bushels corn, 50 tons hay, a ton of butter, a ton of cheese, 2600 pounds pork, live weight, besides sheep, fowls, calves. On this farm were fattened 500 turkies, for market, that yielded a good profit.

The other farm of the same size as the first —220 acres—yielded 31 bushels wheat, 400 bushels oats, 750 bushels potatoes, 100 bushels corn, 75 tons of hay; 32 cows yielded 3000 pounds butter and 5000 pound cheese, 2100 pounds, live weight, of pork were fattened, 500 pounds of sugar were made, 23 bushels beans raised, aside from many other items of income. Both of these hard-working farmers are increasing their respective incomes, and adding to the wealth of the State, by the bountiful productions of their farms.

Now some may ask, how can the average remain so small, where such farms exist? I answer, that when I turn my eyes from these farms to the west, I see on the side of the mountain another farm, with a log house and a log barn; the axe sticks in the log where the wood was cut to cook the breakfast, and an emaciated pig squeals and roots around the kitchen door. The owner remarked to me that as he could now cut about fifteen tons of hay, and although most discouraged, he didn't know but he had better rub and scrub and set out a few apple trees.

It has been hard work for that farmer to live; and there are many like him in Essex, Caledonia, Lamoille, Washington and Franklin counties, and probably all over the State. These small farms of rough land, poorly tilled, cut down the average production, but serve a valuable purpose in helping to make up school districts, and giving variety to the neighborhood. There are in Vermont many acres cleared, and many farms occupied to-day, that should have had the grand old forests still waving over them. On such land men wear away their lives with small reward. The soil is perverse and obstinate, in its wet, stony or precipitous hardness. Master and mistress show, in their rugged, care-worn features, angular forms, and calloused hands, the evidences of constant industry and economy. At the same time, there are other acres yet uncleared and untilled, that would bountifully reward the labor bestowed.

Having considered the farms, we now turn to the farming. While the farms were being cleared, the crops from the newly burned land were generally satisfactory, and as they were consumed by the cattle, winter after winter, piles of manure accumulated about the barns. After the stumps were rotted, and the plough disturbed the soil for the first time since creation, the crops were still satisfactory. Yet continual cropping soon lessened the yield, and the accumulated manures were gladly applied. Still as the plough made its way from one new field to another, more was taken from the soil than was returned to it, and then a diminution of crops was the result, but not sufficiently perceptible to occasion alarm. Generally one portion of the farm was put into permanent pasture, another into permanent field, and the plough run here and there, as choice or necessity dictated. For a time a scanty dressing of manure gave a fair crop of grain, but eventually the grass seed failed to catch, and if the owner has grown old on the place and has reared a family of children that have left, you see a run down farm and a home for sale.

There are many farms in this condition, and now all depends upon skill. Henceforth it becomes a straight fight of skill against sterility.

Under these circumstances, it may not be amiss for us to study the operations of farmers in other nations, that have accomplished what we must now undertake. In England, agriculture is not only self-sustaining, but constantly improving; barren heaths and downs are, by the assistance of turnips and sheep, of drainage and thorough cultivation, made fertile estates. A system so satisfactory in its results there, must be worthy of our attention. A mere glance at English farming suggests a need of a change of sentiment among us in regard to permanent occupation of farms. This must be one of the first steps towards improvement. For miles, on some roads in this State, every farm has its price, and not a few change ownership as often as once in five years. Now with such feelings, permanent and thor-

ough improvements are seldom undertaken, or if commenced, are not carried to final and successful results.

When we consider our farms as homes that we desire to transmit to our children unincumbered by mortgage, by weeds, or by sterility, then shall we begin to think of, and to practice a self-sustaining system of farming; a system in which the raising of roots, and the fattening of cattle must become more prominent, and the farmer a more thorough business man. He must understand the capabilities of his land and with judgment distribute his labor and crops upon it. He must study the markets and decide when to buy and when to sell; when to hire, how to keep, and when to discharge help. The seasons, too, must be regarded, in sowing and harvesting, in rearing young animals or in fattening the old.

Permanency of residence, then, is one of the first steps toward permanent improvement and high farming. But so long as the middle aged flock into the villages, where they may preside at justice's courts, act as jurors, shave notes for young farmers, sell liquor as town agents, collect taxes and serve writs, at just the age when experience qualifies them to be the most successful, is it not inevitable that the young men, proverbially fickle, should drift in the same direction, and watch for a chance for work in shops or factories, or for situations in stores and offices. The gist of the venerable adage, "Old men for counsel, young men for war," must be recognized on the farm. The wisdom and experience of the father should guide and direct the ambition and strength of the son; and the expression should never be heard again, that "a young man prospers because his father died, and left him property;" but it should rather be said, "the son prospers because the father lives to direct him by his counsel, and to aid him with the capital necessary to success in his chosen vocation." Fathers and sons should be mutually blessings to each other. Our foreign population may become industrious, worthy citizens, but to none can our land be so dear as to those who were bred upon it, who have taxed themselves to found and to sustain its institutions, and to defend its honor. The young farmers must be kept in Vermont, for

> Ill fares the land, to hastening ills a prey,
> Where wealth accumulates and men decay.

How, then, shall the young men be kept upon the farms? In the first place, the old men must be satisfied with farming, and remain upon the farm themselves. The idea that the disappointments and failures, incident to this calling, are more serious and disheartening than in other occupations, must be corrected by a better knowledge of the disappointments and failures of others.

If the son is thus trained up in the way he should go, then trust him, and believe the declaration of the sage, "that he will not depart from it." Train him to manage and trade, as well as to delve and dig. Don't be too conservative about the purchase of labor-saving machinery. Remember that you yourself were once young and ambitious, and treat your sons as you would have been treated when young.

Then we should gather together the facts which justify a bright-side view of Vermont farming. Do not statistics prove that our grain yields more per acre, and bears a higher price than at the West. What we buy is cheaper, and real estate is advancing, as well as in other sections. As an instance in point, I may allude to a young man who went from Orleans County to the West, obtained a farm under the homestead law, and wrote back urging his brother to come West, where he could double his money in four years! The brother responded, "I can do as well as that here. Ten years ago I was worth $600, now I am worth $3000,"—all made from the crops and from the rise in price of an ordinary sandy farm.

Then our churches, schools, roads, markets, and neighbors make Vermont a desirable place for a farmer's home.

If the young men remain, and the care of the estate is devolved upon them, how shall the old men busy themselves while "the years draw nigh when they shall say they have no pleasure in them, and desire shall fail, and the grass hopper be a burden?"

In referring to a few branches of agriculture adapted to the aged, my purpose is less to advise others, than to map out a road that in due time I must travel myself.

Where the preparatory work for an orchard was made in middle life, fruit raising is a congenial employment for the aged. With their experience every kind of fruit can be made to pay, if the best varieties are chosen and that care given that is essential to success. The markets are never overstocked with these healthy productions of the soil. Fresh, dried, or canned it is always in demand, and a new seedling of rare merit is sometimes a fortune in itself.

Bee keeping is so nearly allied to farming that it is an easy change even for the old to adopt this. On 718 farms in Orleans county there are kept only 614 swarms of bees. Yet their products are in constant demand at full prices, the capital required is small, and where intelligent care is bestowed the profits are large. J. D. Goodrich, of East Hardwick, has this year taken a ton of choice box honey from sixty swarms of bees, at little expense except removing the precious harvest. A thousand farmers might pass their declining years in this employment.

The raising of blood stock is another branch of farming which is well adapted to engage and reward the old farmer who has had the necessary previous training for this pursuit. Almost the last animal relinquished is the cow. Let this favorite one be of some

excellent breed, that shall by her annual calf bring in an income equal to $1000 at interest.

A horse is usually kept for the use of old people. May not this animal be a mare of such merit that the colt that annually sports at her side shall command a price equal to the interest of another $1000.

Then the few acres reserved from the large farm might as well graze a few sheep to keep up the supply of warm flannels and the most nutritious meat. Let them be the beautiful, trim South Downs, which never disappoint their owner, either in wool or meat; or the enormous Cotswolds, which under an old farmer's skilful feeding, should each become so excellent as to afford better returns than $500 at interest.

Many portions of the work in dairy farming on a large scale can be conducted by farmers who could hardly endure constant outdoor work. The care of cheese, the making and storing of butter that brings in an income of $5 or $8 per day, makes a man at the house and a foreman upon the farm almost a necessity.

Thus by adopting any or either of these branches of our glorious calling, the old man never becomes a drone or an idler or a stumbling block to turn others away from this pursuit. His steadfast enthusiasm and devotion ennobles the calling and causes young men of talent to join in the ranks of the tillers of the soil. He stands at his post, and with colors still flying, bears down to that port where he casts anchor in calm, peaceful waters, till he hears a voice saying, "Well done! thou hast been faithful over a few things: I will make thee ruler over many things."

With the strength of the youth and the wisdom of the old combined our prosperity has only commenced; and soon Vermont farming will do justice to Vermont farms, and her farms shall be found worthy of the most intelligent farmers.

For the New England Farmer.

COMBING WOOLS.

Mr. Editor:—Perhaps it may not be lost labor to call the attention of readers of the New England Farmer to the great demand which exists at present for combing wools. The manufacture of worsted goods has greatly increased of late, and is likely to increase for years to come. The United States have been heavy purchasers of dress goods from England; but some of our enterprising establishments are now making certain styles of goods equal to those imported. The Everett mills, Pacific mills, Washington mills of Lawrence, with a number of smaller establishments in that city, are making worsted yarns. Then there are in Lowell, the Hamilton Manufacturing Company, the Carpet Manufacturing Company, and James Dugdale. In Manchester, N. H., will be found the Manchester Print Works, using a large amount of wool of this description, and quite a number of smaller establishments in Rhode Island. The Hamilton Woolen Company of Southbridge are about commencing a mill on worsteds.

These all want pure blooded wool from the Leicester, the Cotswold, and Lincoln breeds of sheep, and the amount raised in the States is comparatively small. The largest of these firms have bought largely in Canada. Some small lots of Canada, now in the Boston market, are held at 70, 72½, and 75 cents per pound, and will be sold at these figures before next May. If the amount of machinery now in operation is kept running through the winter, we shall have to import from England, and that the consumption will not be reduced at all is certain, the business being too remunerative. But while these full blooded wools are bringing such high prices, half and quarter bred are bringing 55 cents per pound, a price nearly equal to fine Saxony, and more than the best Merino brings in the eastern market.

Sheep husbandry has, at the present time, but few advocates, on account of the low price at which wool has been sold lately; but notwithstanding the depression of clothing wools, the price of combing wools has been very remunerative, and pure bred wools will continue to be so for years to come. Machinery will increase faster than the wool; for neither half, one quarter, nor even three quarters will take the place of the pure bred wool. Nothing but the best will make lustre goods. For some purposes the mixed breeds will answer full as well as the best.

The increase of the pure breeds must as a consequence be small, but the price of wool and the increasing demand for good mutton will render the question an important one. I have no doubt that the stock will bring high prices, but the half breed wool will bring a price which I think would be worth the attention of our farmers. A lamb would not be despisable from a Cotswold or Leicester ewe by a good large long wooled Merino ram, but it would be of much more value by a long wooled ram, and were it not such a very great draft on a small Merino ewe. I should say that such an one crossed with a Cotswold or Leicester, would produce splendid combing wool. I do not intend to write an article on cross breeding, but simply to give the price of wool and the prospective demand. With regard to our fine wools, I would say, that prosperity is returning,—wool will be worth more than it has been for some time; the farmer may look for a ready sale for his wool, when well washed, at 40 cents. He may also look for a reduction in the price of corn, grain, butter, cheese, beef and pork, then wool will compare with these in price more favorably than at present. I should not think it advisable for our farmers to sell their sheep, but were any so disposed, I should think it an excel-

lent time for farmers who own good sheep farms to purchase. Farmers ought to copy the business methods of some of our manufacturing companies, when business has been dull and men unfortunate and wish to sell, or are compelled to sell their establishments. They take advantage of other's necessities or follies, and make their purchases, and when business revives they are ready with their cheap mills and cheap machinery to successfully compete with those who have obtained their places less advantageously. Too many of our farmers fail by not being sufficiently quick and ready to take advantage of those circumstances which are continually offering to make such investments as would yield them rich returns. To those farmers who are discouraged about the price of wool, I would say, do not sell your sheep; to those who have money, I would say, if you can, purchase a few Leicesters, Cotswolds or Lincolns; if you cannot do that, then find some one who will not take my advice and buy their Merinos cheap. MENTOR.

Boston, Sept. 25, 1868.

For the New England Farmer.

PREMIUM BUTTER.

MR. R. P. EATON:—*Dear Sir*,—When you asked me at Dedham yesterday for a statement in connection with the box of twenty pounds of butter entered at the Norfolk County Fair, as a sample of what I had made since May 15th, I thought I would not let you publish it. But heeding your suggestion that the public need line upon line in the matter of butter making, as well as on other subjects, I repented, and herewith enclose my statement as you desired.

To the Committee on the Dairy of the Norfolk County Massachusetts Agricultural Society.

This lot of butter, No. 7, is part of one week's churning, and was made on Wednesday of this week. The milk is strained about two inches deep, into tin pans, and set in a room on the ground floor. This room is furnished with movable racks for the milk to rest on, and is used for nothing but milk and cream. The cream is usually taken off every morning and kept in a large tin pail that will hold about five gallons. It has a close-fitting cover and is hung in the well to cool the cream, whenever it is desirable. The well is under a roof, and is furnished with pulleys, so that forty or fifty pounds of cream or butter may be lowered or raised with ease, and remain suspended at any depth desired. The cream is well stirred when more is added, and is churned but once a week, except in extreme warm weather.

Churning is always done with the cream at a *known* temperature, varying from 60° to 64°, according to the outside temperature. Churn about an hour in Davis' self-adjusting churn. When the butter begins to "gather," pour in a few quarts of cool milk or water to thin the buttermilk and aid its running off. When it is drawn off, put in more cold water to cool and harden the butter and clear off the remaining buttermilk. If the cream contains little flakes of sour milk that have, by heat or age, become separated from the whey and formed cheese, and known as "white specks in butter," I know of no way of getting them off from the butter as easily as to thoroughly rinse in cold water several times. It must be done before the butter is gathered into a solid mass. If the sour milk contained in cream is thin and tender, as it is in its first stages of souring, it will all leave the butter readily in the buttermilk, but when it has separated from its whey and become cheese or curd, it can only be removed by picking out the specks by hand, while working, or washing off in water while the butter is in little crumbs in the churn.

After the butter has been sufficiently cooled and worked in the churn, it is taken on to a maple board, shaped like a fan, four inches wide at one end and twenty-six at the other, and twenty-eight inches long, with four inch strips at the sides put on with screws. At the narrow end, a three-inch strip is screwed on across the sides, and forms a cap, under which a movable white-oak lever is held down at its small end. This lever is the same length of the board on which it is worked, exclusive of the handle, which is turned at the large end. The face of the lever is about two inches wide at the small, and three at the wide end.

After the worker is scalded and cooled in cold water and fastened firmly in a common sink, with the narrow end about four inches the lowest, the butter is taken from the churn with a ladle and placed under the lever, at the rate of ten pounds at a time. It is then repeatedly pressed and turned till the moisture, (it can hardly be called buttermilk,) is thoroughly removed.

Salt is then worked in with the lever, at the rate of about three-fourths of an ounce to the pound of butter, which is as much salt as my customers will allow. More would be required if it were added while the milk remained in the butter, as much of it would run off with the buttermilk, while working.

If the salt could be worked into every particle of the butter at this time, it might be now ready to stamp for market and deliver to the customers. But as salted butter is yellower than fresh, unless the salt is actually distributed perfectly even through the whole mass, it will, after standing a few hours, show, on being cut, a streaked, spotted or marbled appearance,—coarse or fine,—according as it was worked much or little after being salted.

In warm weather I prefer to hang the butter in the well to cool a few hours before putting it through the mould; again working it evenly at this time, on the worker.

This season, until July 1, my butter was sold at fifty-five cents per pound; in July at

fifty cents, and the last three weeks at sixty cents, delivered to the customers.

During the four months' trial I have had eight cows. One was sold for beef June 22; one heifer, three years old, dried off July 15; one cow came in, August 1. Have now six in milk. Two are in their prime, one of them, the one that come in August 1; the other four are all young. Two calved in August of last year; the other two calved at two years old or under, last spring. The two old cows give at this time about twenty-two quarts per day; the other four only about eighteen; or forty quarts per day in all. One quart and a pint per day are sold; also all the night's milk one day in each week is skimmed at twelve hours old. Have made, in the time between May 15 and September 16, inclusive, 512 pounds, besides what has been used in the family.

The feed is now mostly corn fodder, cut up green and fed in the stall. Some dry hay is given, also three pints of corn meal per day. The cows were turned to pasture about June 1, and had two feedings of hay each day. The pasture has yielded very little feed since August 10, when the corn was ready for them. The cows have run out from six to eight hours per day. The remainder of the time they have been in the stalls, where a large amount of manure has been secured for future crops.

The corn fodder has been about half Southern White, the other half a large Sweet. I prefer the Sweet for the following reasons: it is better liked by the cows; it will bear thinner planting, and is consequently more leafy and does not lodge as much in rainy or windy weather. Land is well manured and furrowed, then the corn dropped by hand thin enough to bear some ears. It is covered with the rear teeth of F. F. Holbrook's Horse-hoe turned outward. All the hoeing may be done with this implement, except perhaps the first planting, as that grows slower, and the weeds might get a start with the corn.

Yours respectfully, BUTTER MAKER.

The following is a copy of the conditions on which the premiums on butter were awarded by the Norfolk County Agricultural Society:

"For the best produce of butter on any farm within the county for four months, from the 20th of May to the 20th of September, a sample of not less than twenty pounds to be exhibited, *quantity* as well as *quality* to be taken into view; with a statement of the number of cows, and a full account of the manner of *feeding* them, and the general management of the milk and butter, first premium $10; second, $8; third $5; fourth $4.

NOTE.—It will be seen that these premiums are offered for the best produce on the farms, and not simply for the best specimens exhibited. Competitors will therefore be required to keep an account, and render a statement of the entire produce within the time mentioned. Each lot must be numbered but not marked; any public or known mark must be completely concealed, nor must the competitors be present at the examination."

You will see by the above that our Society intends to have the Dairy Committee act unbiased, and without any prejudice. They have the butter and the statement only to work upon. I have entered butter and furnished a statement the past six years. Have taken the first premium ever since the first year, when I was awarded the second. There have generally been three or four entries each year requiring statements; but I have never seen the statements of any of the other competitors, and only one of mine has been published by the Society.

The second premium has been taken the last five years by Mrs. Nathan Longfellow, of Needham. I am promised a copy of her statement, and hope it will be published for the public benefit. Truly yours,

A. W. CHEEVER.

Sheidonville, Mass., Sept. 19, 1868.

REMARKS.—We are greatly obliged to Mr. Cheever for his prompt response to our invitation, and can assure our readers that the account above given of his method of caring for his stock, keeping his milk, and making his butter is richly worth a year's subscription to this or any other agricultural paper. We quote occasionally the prices, and remark upon the demand for "fancy butter," in our report of the produce market, and farmers who wonder why their good wife's churning does not rank with the best, may possibly find the reason in carefully reading the above article.

The butter which Mr. C. refers to as taking the first premium, we examined closely, at Dedham, and consider it for richness of color and neatness of putting up fully equal to anything we have seen at any similar exhibition. Had we been among the privileged "tasters" of the butter committee, our praise would not have stopped at color and packing. But knowing the temptation which it offered to longing bystanders, the society wisely provided glass cases, securely locked, and the eyesight alone was feasted.

The simple statement that Mr. Cheever obtains 60c per lb. for his butter, while ordinary dairies sell for 42 to 45c, shows the profit in making a choice article, and we only need add here, what we have often assured our readers, that, in this or any other market, *a fancy article will command a fancy price.* But it must be *choice*—no discount from the *gilt*-edged article.

For the New England Farmer.

THE GARDEN FOR FARMERS,

MECHANICS AND PROFESSIONAL MEN.

The present is the season for enjoying the products of the garden, rather than for talking about its cultivation, yet I wish to say a few words, regarding its care and culture, even at this time; for spring is coming again, and then the garden will claim our attention.

According to my experience and observation, the gardens, too generally in the country especially, has been and is still most wofully neglected. But it would not be so, I think, if there was any just conception of the pleasure and comfort which a well cultivated one affords, and the profit it gives. I say profit, for ordinarily, I believe, no piece of land of equal size will yield so large return to the faithful cultivator for the outlay of time and means as the garden.

I say nothing of the luxury it is to have an abundance of good fresh vegetables of all kinds in their season for the table; but base my argument on its economy. In these days of high prices of all kinds of provision, it is a source of solid satisfaction, as well as profit, to have such a generous supply of wholesome food as the garden affords, without a single demand upon the diminishing purse, to say nothing of the draught upon the temper. And I believe it is a principle of sound political economy,—I know it is of domestic,—to coin the labor of our hands, or the thoughts of the mind into necessary articles of life; to change the useless into the useful; the unseemly into the beautiful. And this is what every one does who cultivates a good vegetable garden, and makes it not only a thing of beauty but of general utility.

But I fear this matter is not so well understood as it should be, by most of our farmers, merchants, mechanics and professional men, especially the ministers, for whose interest, as much as that of any other class, I write. Judging from my experience and observation, and they have been somewhat extended, I am compelled to say, that in the country, the garden is a matter in too many instances most sadly misunderstood.

For the last twenty years, owing to the unsettled state of my professional life, I have had the charge of eight different gardens, and in every instance I have found them in a condition of sad and heart-aching demoralization. During this time I have succeeded to the occupancy of the estates severally of three mechanics and two ministers, one merchant, one lawyer and one farmer; all of which, as I found them, were living witnesses of indolence, indifference, or gross neglect, being filled with rank weeds and foul matter, which I had to remove, to say nothing of their uncounted progeny which afterwards I had to subdue and destroy, before I could make sure of any satisfactory results from my labor. Of these eight gardens the one that was left in the best condition was that cared for by the lawyer; the worst, those that belonged to the ministers and farmer. Now to my mind such neglect of the garden is wrong. I do not say that it is general; I am happy to know that there are exceptions, but as I ride through the country and look into the gardens of friends or strangers, I find too often a more rank and luxuriant growth of weeds than of fresh and needful vegetables.

Much of this is owing to the fact, doubtless, that the garden does not occupy the place in the popular mind which its merits demand; but is regarded rather as a customary appendage to the house, to be attended to at leisure, or put off to a more convenient season; yet we seldom find one who does not truly enjoy the varied production of the garden.

To the farmer, under the press of work that constantly bears upon him in the spring and summer, there may be some show of excuse; but none usually for the mechanic or professional man, and especially the minister. He has or may have time to take the very best care of his garden, and thereby not only improve his health and increase his means, but enlarge his usefulness; for without health a minister is shorn of the right arm of his power. Not that this is all, but without health the finest powers of heart and mind will fail to do their legitimate work,—that of reaching other hearts, and arousing them to activity in the sacred work of humanity and of God. Health is not a thing of luck or chance; it is a manufactured product, as much as a piece of cloth or any machine; and there is no other way by which we can secure this blessing, than by paying its price and complying with its conditions,—one of which is cheap, out-door exercise; nay, muscular labor, which in a measure we get by faithfully attending to our gardens.

In conclusion, let me urge it upon all who are blessed with the privilege of having a garden, to see to it that they are not guilty of letting it run up to weeds, but that it shall produce an abundant supply of useful and wholesome vegetables for the table. S. Barber.

Bernardston, Mass., Sept. 3, 1868.

Remarks.—We regard the advice of our correspondent, particularly to ministers, as most timely, and for the purpose of commending his suggestions to their attention we may be excused for saying that the writer is himself a clergyman.

In the early history of New England, the clergy were healthy, and remarkable alike for long lives and long pastorates; while of late they are the most sickly of all the professions and occupations among us, and their "situations" if not their lives have become alarm-

ingly precarious. We believe that our correspondent has suggested one of the causes of this unfavorable change—the neglect of out-door exercise and muscular exertion. A vegetable and fruit garden, if not a farm, was a necessary part of a New England parsonage of the past generation, as they still are and always have been of the religious establishments of the Catholic church. For the bodily exercise necessary to health, the English clergy have sometimes resorted to field sports and recreations which would hardly be tolerated in New England. But for all these things our clergy have no taste; and we doubt whether history affords an example of such entire neglect of open air exercise by any class of men as that furnished by the clergy of New England during the past fifty years. The result is not only that their "bodily presence is weak and their speech contemptible," but many of the more far-seeing among them are lamenting their loss of influence with the masses, and the growing estrangement between pastor and people. As "with the people, so with the priest," the laws of our being cannot be violated with impunity. And among these laws, must be included the old enactment, that "by the sweat of thy face,"—not mind or intellect,—"shalt thou eat bread." This edict may be evaded, but not its penalty.

NEW PUBLICATIONS.

How Crops Grow. A Treatise on the Chemical Composition, Structure, and Life of the Plant. for all students of Agriculture. With numerous Illustrations and Tables of Analysis. By S. W. Johnson, M A, Professor of Analytical and Agricultural Chemistry in the Sheffield Scientific School of Yale College; Chemist to the Connecticut State Agricultural Society; Member of the National Academy of Sciences. New York: O. Judd & Co. 1868. 294 pages. Price $1.50.

Our first impressions of the value of this volume are so decidedly favorable, that we care not to wait for a more thorough examination before commending it to the notice of our readers. The work is divided into three parts. The first division treats of "the chemical composition of the plant;" the second is devoted to "the structure of the plant and the offices of its organs;" while "the life of the plant" is the subject of the third division. Numerous tables of analysis are also given in the appendix. The author has endeavored in this volume to lay out a groundwork of facts sufficiently complete to serve the student of agriculture for thoroughly preparing himself to comprehend the whole subject of vegetable nutrition, and to estimate accurately how and to what extent the crop depends upon the atmosphere on the one hand, and the soil on the other, for the elements of its growth. For those who have not enjoyed the advantages of the schools, the author has sought to unfold his subjects by such regular and simple steps that any one may easily master them. It is also adapted to the wants of the class room.

Though complete in itself, this volume, which is designed to explain "How Crops Grow," is to be followed by one to tell us "How Crops Feed." Two others,—one on the Improvement of the Soil and the Crop by Tillage and Manures, and the other on Stock Feeding and Dairy Products,—are contemplated.

For the last twelve years Mr. Johnson has delivered lectures annually upon agricultural chemistry and physiology, at the Scientific School of Yale College, and he informs us that this volume is a result of studies undertaken in preparing these lectures. Mr. Johnson, however, is better known to the farming community by his many valuable contributions to the agricultural press, in which he has shown rare ability to instruct and interest the general reader.

The systematic arrangement of topics, and the careful division of the matter into convenient paragraphs, adopted by the author are distinctly marked by the printer. The numerous illustrative cuts, tables and indexes are very neat and satisfactory. The price, too, at which the volume of nearly 300 pages is offered, places it within the reach of every one who can afford to buy books at all. We commend this volume to the notice of all who wish to know "how plants grow."

MR. COCHRANE'S STOCK.

Our attentive correspondent, Hiram French, Esq., of Eaton, Compton Co., Canada East, gave the readers of the Farmer last year a description of the stock imported and bred by his neighbor, H. Cochrane, Esq., of Compton Centre, including cattle, horses, sheep, and swine. We find in the *Country Gentleman* an account, by Sanford Howard, Esq., of a late importation, which was selected with much care by Mr. Cochrane himself and by Mr. Simon Beatte, both of whom personally examined the most celebrated herds of England. Mr. Howard says:—

"The newly imported animals reached their destination safely August 31. The cattle purchased in England are ten Short-horns, nine cows and heifers and a bull calf and two Jersey cows. Two Short-horn calves were dropped on the passage. The sheep comprise forty yearling Cotswold ewes and five rams from the flocks of Messrs. King Tombs, Garne and Lane. Among the ewes are those which took the first and second prizes at the late Yorkshire show. A very handsome young Suffolk mare, and a yearling Suffolk colt (entire,) of extraordinary size and excellent points, with a beautiful Welsh pony made up the lot. The cost in England was equal to $15,000 in gold.

From Harper's Magazine, for October.

HOW WE KEPT OUR TRYST.

The golden summer months had fled
Behind a veil of silvery haze;
With stately march September led
In narrow file the Autumn days.

By many a path her steps were seen
In fields where late the Summer strayed,
And where the woodland's leafy screen
Flecked every winding walk with shade.

Her light breath, moved to gentle gales,
Stirred the long tassels of the corn,
That nurtured 'mid the sheltered vales,
Shone in the golden light at morn.

Within the hemlock's feathery top,
Through all the sweet September day,
With lengthened trill and sudden stop,
The blackbird piped his mellow lay.

An unseen influence working change
A thin veil o'er the landscape drew;
More distant seemed the mountain range;
The clouds to towering castles grew;

And coloring every shade of thought,
Each flight of fancy grave or gay,
With subtle wand of wizard wrought
Some new enchantment day by day;

And in the maple's fretted leaf
Kindled a crimson-tinted flame,
As nearer, now the days grew brief,
October's bannered legions came.

So, in September's soft decline,
When thicker grew the Autumn mist,
And swollen were the grapes with wine,
I sauntered towards our place of tryst.

By pleasant paths my footsteps lay,
Through fields that slowly gathered brown,
Where, sailing past me on its way,
Floated the thistle's ghostly down.

'Twixt stately orchard rows I strolled;
Before my steps the robin fled;
With glints of russet and of gold
The apples ripened over head.

A sudden turn, and full in view,
Across my path, the low stile stood,
Where one wide spreading chestnut grew
Right in an angle of the wood.

And seated, waiting there for me,
Half in the sunlight, half in shade,
Beneath the chestnut boughs was she,
The one with whom my tryst was made.

Oh, sometimes, love, do you recall
That hour, though years since then have fled;
And do you still remember all
The fond, the foolish words I said?

But let them pass (I think we may);
Their absence here will scarce be missed;
What need of more, since on that day
It was for life we kept our tryst.

WAGES AT THE WEST.—A correspondent who informs us that he has been travelling recently "in pursuit of a home," closes a business letter with the following statement:—"One thing I think should be made public through your columns, and that is a warning to the laboring people and mechanics of the East not to expect great wages at the West, for they will be disappointed, as wages for laborers are from $1.25 to $1.50 per day at harvest and only a limited demand at that, with board at $5.00 per week. The country is overrun with men seeking work, and "few there be that find it." He does not state to what particular portion of the "West" he refers.

CATTLE DISEASE.

The disease generally called Texan fever, or Spanish fever has been long known among the cattle of Mexico and Texas. It was known in the cattle ranches when that country was under the government of Spain; hence its name, Spanish fever.

The idea that the disease does not exist among the Texan cattle themselves, but that, in some mysterious way, they carry with them the seeds of the disease and communicate them by infection to cattle born and living in more northern latitudes, is undoubtedly a delusion. The fact is that the Texan cattle have the disease, though in so mild a form that it rarely proves fatal. Driving them for many successive days, in large herds, in hot weather, or crowding them upon the decks of steamboats, under a scalding sun, increases the intesity of the disease, and renders it more infectious, so that northern cattle, which have never been acclimated to it, take it from them, and undergo it in a form that in many instances proves fatal.

The disease was introduced in the early part of the present season into Southern Illinois by Texas cattle brought up the Mississippi in boats to Cairo, and at once it spread through that section, creating a great panic and occasioning a great loss of property. The weather was very hot and dry in that region when the cattle began to arrive. It is well known that all Typhoid diseases prevail with more intensity during dry and heated periods. This doubtless had an influence in rendering the disease more fatal. But the mode of moving the cattle probably had still more to do with the outbreak.

Until recently few or no cattle have been brought from Texas on boats. They have been driven through the Cherokee Country and Kansas, starting in February and March, moving slowly and stopping to rest and feed, and reaching Illinois in April and May. Here they are turned upon the prairies till July and August, when they become fit for the market. By this slow process of moving, and

gradual approach to a more northern latitude, and consequent gradual change of diet, they get rid of the disease, if it existed at the time of starting on their journey.

When they are brought on boats, the transit is completed in a few days, and they bring with them whatever disease existed at the time of starting, aggravated by the crowding, starvation and thirst they undergo on the boats. The haste of the drovers to get them to market has proved injurious to their own interest.

These cattle evidently require to be subjected to a quarantine of several months before other cattle can be safely exposed to intercourse with them, and before they are fit for human food Such a quarantine they formerly underwent to a considerable degree, in the time and mode of driving them to the north; and hence they seldom introduced the disease, although cases of it were known from time to time.

The disease appears to be most rife in May, June and July; and as the weather becomes cooler, it gradually disappears. Cattle that have been wintered in the north appear to be no longer subject to the disease, unless exposed anew to the infection.

By the report of the Illinois Cattle Commissioners, the 30,000 or 40,000 cattle now undergoing quarantine in Kansas, are in a thrifty and healthy condition, and will soon be in a state to pass on to their destination with safety to all concerned. Such facts will teach the capitalists who are concerned in moving cattle, as well as the Legislatures of the States through which they pass, the proper course to be pursued.

The disease is undoubtedly a Typhoid fever. Its most intense action is found in the duodenum, or upper portion of the small intestines, in which there is inflammation, which causes contraction of the intestines and obstructs the passage of solids, thereby occasioning constipation. When the disease is fatal, it is so usually within 48 hours. At the first outbreak of the disease at any place it is more fatal; most of the first cases terminating in death. As the disease progresses, it becomes milder, many of the cases recovering. This gives rise to the belief that some remedy has been found capable of controling it. Near the close of the disease, or when it is about to disappear, most of the cases get well, and the cattle thrive and fatten rapidly.

Such appear to be facts respecting this disease, as we gather them from those who have been most conversant with it. The alarm is over for this season, and we shall probably hear little more of it, until next season; except in the halls of Legislation, in several of which it will give rise to discussion during the coming winter.

BUMBLE BEES.

There are some very pretty stories told about the domestic bee waylaying the honest bumble bee, and robbing him of his hard earned gains. Such tales are evidently the product of a warm imagination. I find that several bumble bees have forced themselves into my hives this season, doubtless for the purpose of plundering. Several were killed, and, after a time, nothing was found but the bumble bee, whose hairy covering was in general entirely removed, either during his fight with the bees, or by subsequent attempts on the part of the bees to remove him. On one occasion I saw a bumble bee enter a glass hive, and, being curious to know how he would be received, I uncovered the glass, and had a pretty good view of the fight. He was attacked by dozens, perhaps hundreds, of bees who attempted to bite and to sting, apparently with very little effect. The bumble bee, on the other hand, by means of his powerful mandibles, succeeded in killing or mutilating nearly a teacup of bees before he succumbed. I, of course, felt very strongly inclined to move to the rescue; but my desire to see what the result would be overcame my interest in the bees. After a time the bumble bee lay exhausted on the bottom of the hive, which was completely strewed with the legs and wings of occupants of the hive. I then covered the glass, and left the hive till next morning. By that time the bees had carried out all their dead, so that if I had not witnessed the fight, I should not have known that any damage had been done. Remedy—never use large holes or wide slits as entrances to your hives. A long slit which just gives space enough for a drone to squeeze through, will keep out the bumble bees, as well as mice and other large depredators.—*P., in Country Gentleman.*

Soil for Flowers.—Leaf mould is good for flowers if two or three years old, and very much decayed; when but half rotten it is an injury. Rotten sod is the best soil for flowers; and cow manure, which has lain two years to rot, the best fertilizer. Where rotten sod is not easily obtained, the edging parings of walks may be preserved in a heap for flower purposes.—*Gardener's Monthly.*

EXTRACTS AND REPLIES.

PROSPECTS OF WOOL GROWING.

I would like to have you inform me through the FARMER as to the prospects of wool growing. Is not the present a good time to start a flock? and are not the grazing lands of Texas preferable to our Northern States, in respect to the quality and cheapness of the land, mildness of climate, and consequent ease with which wool can be grown? Are greenbacks current in Texas? Also, please inform me which is the best work published on wool growing. I. C.

Candia, N. H., Sept. 28, 1868.

REMARKS.—Wool is low; sheep are low; weak-kneed farmers are anxious to sell and go into cattle, horses, or something else, and we believe the present is just the time "to start a flock." But a change from New Hampshire to Texas, is, in our opinion, too great both for one's health and one's habits, and we are disposed to favor emigration on parallels of latitude rather than of longitude. Still we have no doubt that the right man in the right part of Texas may do well with sheep, *after he learns how to manage them there.* We should advise you to spend at least one season with some wool grower in Texas, as an apprentice, before going in for yourself. As to greenbacks, take a pocketful down with you, and our word for it you will soon find out that they pass currently enough. The *Practical Shepherd*, by Dr. Randall, is not only unquestionably the best work on wool growing generally, but you will find therein much information upon the climate, &c., of Texas, with special reference to the production of wool. At pages 431-2 you will find a record of the season and crops in Fayette County, for four years, from which we are tempted to copy entire the remarks for the year 1857:

January.—No rain.
February 6.—Prairies getting green.—10th. Corn, peas, lettuce, and radishes coming up. Rain one inch
March 7.—Corn six inches high; prairies one month forward. 12th. Terrible frost; kills everything—fruit and crops. Rain one inch.
April 5th.—All green again; new crops up and vigorous. 6th. Norther, hail, and freeze; all crops, fruit, and mast, killed. 11-12th Sleet, snow, and freeze, again. 24th. Frost in valleys. Rain, ¼ inch.
May 30th.—Rain two inches—not 12 inches in a year.
June 11th.—Wheat reaped; good crop; man and beast suffering for water. 20th. Grass all dead.
July.—No rain!
August.—No rain!
September 7th.—Oaks drying from drought, except live oak. First good rain this year, two inches.
October.—Rain, 3½ inches. The prairies green.
November.—Grasshoppers west. Reasonable rains; good fall gardens. 26-27th.—Hard storms very extensive; Nebraska wrecked at Galveston. Rain 2½ inches.
December.—Lowest temperature, 30°.

HISTORY OF THE EARLY ROSE POTATO.

MESSRS. EDITORS:—In your issue of the 29th of August last, I read a communication entitled, "History of the Early Rose Potato," signed "M. P.," Orwell, Vt. As both my reputation and character are assailed by this anonymous contributor to the FARMER, I respectfully ask of you the privilege of presenting to the public a complete refutation of said statements through the same journal which gave publicity to "M. P.'s" communication.

To do this, I give you the facts known to myself with my own experience and observation, testified to and confirmed by the affidavits of several well known gentlemen, among whom is Mr. Chas. Blackmer, of Hadley, Mich., whom "M. P." claims to be the originator of the Early Rose Potato, and therefore justly entitled to the credit bestowed upon me.

In 1860, Chas. Blackmer worked for me, and we occasionally talked about growing seedling potatoes, and were agreed that the choicest kind for that purpose was the Garnet Chili. Accordingly both of us saved seed from that variety. In the spring of 1861, I planted the seed I saved, which failed to vegetate. I informed Mr. Blackmer of this, and he told me that he still had his seed, and as he should not plant it, he would bring it down to me, remarking, "You may plant it if you choose." This I did, the same spring, and produced the potato now called the Early Rose, and also my seedling, No 2.

Besides these, I have other seedlings from the Garnet Chili, but not from the seed which Mr. Blackmer gave me, which I prize very highly; among which, the most promising is No. 4, the one probably to which "M. P." alludes, instead of No. 2, when he speaks of my preparing to bring forward No. 2, of Mr. Blackmer's seedlings, as a variety of my own originating.

This statement of facts confirmed by the following affidavits, will enable the public to decide to whom credit is due in respect to originating the "Early Rose" potato.

It is in justice to myself, not less than in regard to my relation to the public with reference to the originating of the Early Rose potato, that I request you, Mr. Editor, to publish my refutation of "M. P.'s" statements, which were published in the NEW ENGLAND FARMER of August 29th, of the present volume; also to give me the name and residence of "M. P.," all of which is submitted. Respectfully yours, ALBERT BRESEE.

REMARKS.—As stated above by Mr. Bresee we did publish in the FARMER, on the 29th of August last, a communication entitled, "History of the Early Rose Potato," of which the following is a copy:—

HISTORY OF THE EARLY ROSE POTATO.

MESSRS. EDITORS:—The credit of originating the "Early Rose Potato" having been claimed by and given to the "wrong party," and thinking the "right man" should have the honor to which he is justly entitled, I will give you the true facts of the case.

In 1862, I think, Mr. Chas. Blackmer, of Hadley, Michigan, then living in Hubbardton, Vt., planted a ball of the "Chili" potato, from which he raised two varieties of seedlings, which he called No. 1 and No. 2. Before he had brought these to maturity, he enlisted and "went to the war;" but before he left for the "tented field," he gave these seedlings to Mr Bresee, at the earnest request of the latter, under the consideration that he should be handsomely recompensed, provided they "amounted to anything."

Mr. Bresee, a neighbor to Mr. Blackmer, brought the potatoes to maturity, and No. 1, was found to be very early, and was quite common as a garden potato for two years in the vicinity and had it not been for Mr. Heffron, of Utica, and some others, who christened it the "Early Rose," and brought it so prominently before the public last spring, it probably would not have been known at this time outside the immediate section where it was raised.

Mr. Bresee is now preparing to bring forward No. 2 of Mr. Blackmer's seedlings as a variety of his own originating. As all these facts are well known in this vicinity, and can be readily substantiated, it is but just that the public should know them. M. P.

Orwell, Addison Co., Vt., Aug 17, 1868.

This communication was received and published, as other communications are, in good faith. The parties mentioned in the article were all unknown

to us, so that there could be no possible motive on our part to misrepresent any one; and on the other hand, we could detect no motive in the writer for stating facts otherwise than as they truly existed. The note enclosing the article giving the history of the Early Rose Potato, is now before us, and is signed "Lester M. P. Griswold." While we cannot entertain a doubt that Mr. Griswold has been misinformed in the matter, as we have Mr. Charles Blackmer's statement, under oath, that "he *did not* originate from seed the early potato now called the Early Rose," we feel equally confident that no blame attaches to Mr. Bresee, and that his reputation and good name are sustained by papers which he has laid before us, of which we deem it necessary to publish only the two following affidavits:—

I, Charles Blackmer, formerly of Hubbardton, Vt., now of Michigan, do hereby certify that I did not originate from seed the early potato, now called the Early Rose, but that Albert Bresee, of Hubbardton, Vt., grew it from seed which he says I gave him. I further say, that at my request, Mr. Bresee gave me one tuber of it, the first or second year from seed.

CHARLES BLACKMER.

State of Michigan, Lapeer County, ss. Subscribed and sworn to before me, this 11th day of Sept. 1868.

ALVAH BENTRY, Notary Public, Lapeer Co.

We Chester Roach, James W. Gibbs and Stephen A. Fenton, of Hubbardton, Rutland County, Vermont, on oath, say that we are well acquainted with Albert Bresee and Charles Blackmer, of said Hubbardton, having been neighbors to them for many years. We further say, that we have had conversation with Charles Blackmer respecting the origin of the early potato, now called the Early Rose. In said conversation Charles Blackmer said that Albert Bresee grew them from seed or seed-ball, which he, Charles Blackmer, gave Albert Bresee. We further say, that so far as we know, Charles Blackmer has never grown any potatoes of any kind from seed or seed ball. We further say, that we have frequently been at Mr. Bresee's place, and have seen his seedling potatoes in different stages of growth, from the first year up to the present time. We also say that Albert Bresee is a gentleman of irreproachable character, and that entire confidence can safely be put in any statement or claim that he has made or may make.

CHESTER ROACH.
JAMES W. GIBBS.
STEPHEN A. FENTON.

Subscribed and sworn to before me, this 9th day of September, 1868. A. GIBBS, Justice of the Peace.

TICKS ON SHEEP—WILD CHERRY LEAVES—A SICK MARE.

Ticks become very numerous on my sheep in the winter season; is there any way to get rid of them except to immerse the sheep in a strong decoction of tobacco? Will sulphur be beneficial, and how can it be administered?

Will wild cherry leaves injure stock, if eaten when green?

What ails my horse? After having driven him, when I unfasten the check rein and the head is lowered, a white matter will run from her nose. Please state probable cause and remedy.

Holmes Hole, Mass., Sept. 20, 1868. TISBURY.

REMARKS.—A wash made of the extract of tobacco will kill ticks, and so will smoking them with burning tobacco. A small machine is made on purpose for this business. The remedy nearest at hand, however, is the common mercurial ointment which you can procure at the apothecary shops. This should be very carefully rubbed in so as to reach the skin, and then the sheep protected for some days from inclement weather.

We have heard of cattle being injured by eating freely of partially withered wild cherry leaves, after the trees were cut or broken down—but seldom by eating them where they were growing in their pastures.

A statement, however, was published some years since in our columns of some cows in Plymouth county, Mass., from whose milk butter could not be made, and on watching them to discover the cause of the trouble, they were seen to reach over a wall and browse some cherry trees within their reach. On changing them to another pasture the milk soon resumed its former healthy condition. Our opinion is that at a certain stage of growth or degree of maturity, even green cherry leaves may be poisonous.

Your mare undoubtedly has a cold. Such symptoms as you describe clearly indicate it. Give her cut feed, moistened, a warm stable, and some slight medicine, twice a week, that will gently move the bowels.

CRANBERRY CULTURE.

I have a large quantity of swamp land and wet meadow, unprofitable at present. It occurs to me that the cultivation of the cranberry might be instituted upon it so that a future generation might possibly be benefited, if I were informed in that branch of agriculture, which no doubt I should have been, had I remembered all I have read in in the NEW ENGLAND FARMER. Can you without too much trouble give me information as to the best time for setting out and how and where to obtain the most profitable and favorite vines?

Troy, N. H., Sept. 1868. G. W. FARRAR.

REMARKS.—It is too late to transplant the vines this fall. If your lands are covered with brush, that might be removed, and the surface cleared for setting the vines upon it in the spring. In the meantime, we will endeavor to give you such information as we have gathered from those best acquainted with cranberry culture among us, when we have more leisure than at present.

GREAT YIELD OF EARLY GOODRICH POTATO.

As others are recording the produce of the Early Rose potato, beans, &c., I am moved to say that last spring I planted five small Early Goodrich potatoes, weighing a little short of one pound. Hoed them twice, dug them the first part of this month, and had two bushels, weighing one hundred and twenty-six pounds. G. W. N.

Acworth, N. H., Sept. 26, 1868.

SICK TURKEYS.

In the FARMER of September 19, "G. E. H.," of Shrewsbury, Mass., complains that his turkeys are dying off. The same disease is quite common in this section. The first symptom is the voiding of matter about the color and thickness of cream, which continues until the bird either gets well or dies. It frequently happens that a flock which went from home all right in the morning, will return at night with one or two lingering along behind, eating little or nothing, and every few minutes passing this matter. They appear sleepy, often remaining with their eyes shut, until the rest of the flock have passed several rods in advance.

I think they eat some weed or insect which poisons them. It seems to me that it would be useless

to doctor them, for when one has been sick with it for three or four days, and then begins to get better, it takes it a long time to recover so as to thrive again.

I wish to inquire where I can get some young ganders, of the Poland breed, lately figured in your paper. THEO. G. LINCOLN.

Taunton, Mass., Sept. 21, 1868.

SCIENTIFIC AND PRACTICAL FARMING.

In one of your late numbers I noticed a communication in which the writer complained of the contradictory doctrines of writers and speakers on agriculture, and asks what is the use of hearing speakers or studying writers whose teachings are thus diverse and contradictory? The great amount of writing and speaking on this subject is worthless. Yet there are men who are capable of instructing the farmer,—men of science in the full sense of the word. I saw in the *Independent* a short time since a statement of what composed the potato, both the vine and the tuber, and then told what manure would afford the articles needed for their growth. I thought that writer capable of instructing me, and I preserved the piece. Speakers and writers in order to be of service to us must tell what composes the different plants we grow, both stock and grain, and what artificial manure we must obtain to supply any defect in the soil; and also must be able to explain the properties of the different soils, and until a man can do this he had better be engaged in growing potatoes than telling others how to do it.

But this is not the main thing that I wished to notice in that communication. He said that writers differed as to the best way to plant potatoes. Some said cut them in small pieces and put the hills near together, while others said plant large potatoes and put them further apart. When I read that, I was astonished that we should call on writers for information on a subject which can only be obtained by actual experiment of the agriculturist. And yet is there a man in New England who can give us the information on this topic which we need, based on absolute and repeated experiments? I have this year tried, on a small scale, different ways of planting potatoes, and will give the results. In each, the rows were twenty-five feet long.

One large potato in each hill, 2 ft. apart, produced	30 lbs.
One large potato split in two, in each hill, 2 ft. apart produced	22½ "
Potatoes cut so as to take about one third as much seed, hills eighteen inches apart, produced	21 "

The potatoes were the largest where the large potatoes was planted whole, and the smallest where a potato was split, and both parts put in the hill. Brother farmers, give us experiments, not theory. PLOUGH JOGGER.

West Poland, Me., Sept. 25, 1868.

REMARKS.—The allusion to the contradictory teaching of speakers and writers on agricultural subjects, with which our correspondent commences his article, may possibly lead some of his readers to ask how he can harmonize his idea of the qualifications which a man should possess before he assumes to teach farmers, with his closing appeal for "experiments not theory." This discrepancy is, however, to our mind rather apparent than real. Between the scientific and the practical there is no conflict or opposition. As Mr. Johnson says in his new book on "How Plants Grow," science and art "are, as they ever have been and ever must be, in the fullest harmony. If they appear to jar or stand in contradiction, it is because we have something false or incomplete in what we call our science or our art; or else we do not perceive correctly, but are misled by the narrowness and aberrations of our vision." There is, however, a great difference between scientific dreaming and scientific theory. Science is simply facts reduced to system. And in this sense every practical farmer is, to some extent, a scientific man. "No farm," continues Mr. Johnson, "was ever conducted without physiology, chemistry and physics, any more than an aqueduct or a railway was ever built without mathematics and mechanics. Let the farmer throw away the knowledge of facts and the knowledge of principles which constitute his science, and he has lost the elements of his success. The farmer without his reasons, his theory, his science, can have no plan; and these wanting, agriculture would be as complete a failure with him as it would be with a man of mere science, destitute of manual, financial, and executive skill." So far, then, as the farmer has reduced the facts of his experience and observation to a system, he is a scientific man, while the inferences and assumptions of the learned are often far from scientific. We doubt whether facts have yet been reduced to so complete a system that any man can do all our "Old Subscriber" thinks the man in the *Independent* has done, or all he demands of those who presume to tell others how to raise potatoes. And until such men do arise we join in his appeal, "Brother farmers, give us experiments, not theory!"

TO PROTECT TREES FROM MICE.

Will you or some of your correspondents inform me and others that would like to know, if there is anything in the form of a wash that will not be injurious to young trees, that can be applied to them late in the fall to prevent the ravages of mice during the winter season. I recollect of having seen a number of different ways recommended to prevent mice from gnawing the bark from trees, but all of them seem to be attended with considerable trouble,—such as treading the snow down around them, banking them up with dirt, wrapping them with birch bark and many other similar remedies. If a farmer has from one to five hundred young apple trees, it is no small job to protect them by any of the above modes; whereas if there could be some kind of cheap wash applied that would answer the purpose, it would be but a small job to make the application, and thousands of young trees would be saved annually.

Dixfield, Me., Sept. 19, 1868. J. J. T.

REMARKS.—We should be particularly pleased to be able to give our correspondent the information desired, as he informs us that though upwards of fifty years of age this is his first attempt to write anything to appear in the columns of a newspaper. To preserve trees from rabbits and sheep, a washing with fresh blood from the slaughter house, has been recommended; also soot and milk mixed with a little soft soap; also a wash of old cow manure and water, soaked several days and applied with a brush or swab, when a little thicker than whitewash. But all such applications are lia-

ble to be washed off by rains which beat upon the trunk during the latter part of fall and winter, and need to be repeated frequently to be effective. From our own experience we prefer the plan of throwing a small mound of earth around the trunk, after removing grass, weeds, &c., which may harbor mice. With a sharp spade or shovel a large number of trees can be gone over in a short time. We believe from our own experience that this is the cheapest protection known. A very little earth thrown immediately against the trunk, we have found effective.

NEW AND OLD VARIETIES OF FOWLS.

Having lately experienced a fresh attack of the "hen fever," which prevailed so generally some eighteen or nineteen years ago, I wish to inquire what are now the standard works on the subject of poultry. My own library contains the volumes by Bement, Bennett, Dixon and Kerr, but I do not find the breeds which now seem to be the favorites figured in them, while the Shanghaes and Cochin-Chinas seem to have had their day.

I find the farmers and poultry-keepers in my vicinity prefer the Black Spanish, Brahmas and Leghorns; which two latter varieties are not described in my books. For myself, I confess to a strong predilection for the old-fashiond barn-yard fowl. I wish to know who among your readers has the breed of fowls which I used to see occasionally in our farm yards twenty years ago, called "Creepers." I should like to see a description of these fowls by some one who has them, stating their general color, size, profitableness, &c, whether they are as troublesome in gardens as the longer legged breeds, and how high a fence may be necessary to confine them. The Brahmas I have frequently seen confined with a fence four feet high, while the Bolton Greys will easily scale a fence eight feet in height, and will also wander a long way from home, while the Creepers possess the advantage of being very domestic in their habits. I should judge also that they would be unable to fly over an ordinary fence—the shortness of their legs preventing them from taking the first spring from the ground.

Another fowl that I well remember, and a favorite in my boyish days, was a kind of Polish or crested fowls, of a black or bluish color, with feathers rough and hairy all over. They were a hardy and productive race, as I remember them, but I have never seen them described.

Can you, Mr. Editor, tell me what works on Domestic Poultry have been published since those I have named, and where they may be procured by

AN OLD SUBSCRIBER.

Rockport, Mass., Sept. 28, 1868.

REMARKS.—We hope some of the readers of the FARMER will reply to the above inquiries of our correspondent. A society was not long since formed in New York that assumed the title of the American Poultry Breeders' Association, which has introduced some new varieties, but we do not know that any recent work has been published.

GOOD CROPS OF HAY.

Perhaps a statement of mine in the FARMER of Sept. 5, in relation to the amount of hay cut from two small plots on my farm, will be recollected by your readers. On looking at one of those pieces, that in the garden, of forty-three square rods, I saw there was a large growth of the second crop, and as I could not turn stock upon it, and was afraid it would furnish harbor for mice during the winter and that they might injure it, I concluded to mow it again, which was done Sept. 5. On haying it I found it weighed 1088 pounds. As the first crop, cut July 18, weighed 1860 pounds the amount is 2948 pounds on the forty-three rods, which is at the rate of five tons and 962 pounds per acre. If any of my brother farmers have beat this I want to hear from them and learn how they did it.

ORISON FOSTER.

Tunbridge, Vt., Sept. 21, 1868.

NORWAY OATS.

In the FARMER of August 15, I spoke of the fine appearance of a field of Norway oats before they were laid flat by a sort of young hurricane that we had here one night. I have threshed the piece and have *thirty* bushels of good oats for the *one* sown. My neighbors who saw them before the blow, say I did not get half what the piece then promised. I shall try two acres of Norways next year and hope for gentler breezes.

L. E. BICKNELL.

Windsor, Mass., Sept. 21, 1868.

BEANS—"THOUSAND TO ONE."

Being much interested in reading about what others raise, I thought I would tell you what two little beans that I planted (a kind of which I plant but one in a hill) have produced. The produce of one stock which I counted amounted to one thousand and twenty-four; the other had one thousand one hundred and fifty beans.

E. K.

Royalton, Vt., Sept. 14, 1868.

GOOD YIELD OF THE EARLY ROSE POTATO.

As others have given their success in raising the Early Rose Potato, I will give mine. From one pound of seed obtained of B. K. Bliss & Son, I dug 133½ pounds. One of the largest weighs twenty-eight ounces.

C. E. L. HAYWARD.

Hancock, N. H., Sept. 28, 1868.

MILK.—SERIOUS QUESTIONS.—What kind of milk ought to be expected from milkmen who pretend to deliver pure milk?

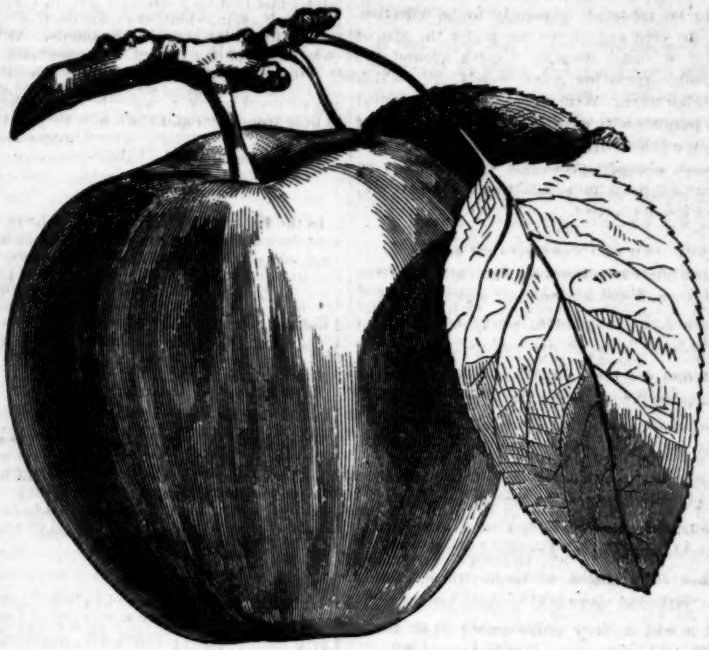
We suppose most people who purchase milk expect to be cheated some, and are disappointed if they are not.

Should milk be delivered just as it is obtained from the cow, or may the strippings be retained, or any of the cream taken therefrom?

This is a tough question. We suppose people who sell milk usually consume some at home, and it is human nature to prefer the richer portion. They want some butter and this is suggestive of the saving of cream.

The milk question is a delicate one, and the more it is stirred up the more chalk will be sure to come from the bottom.—*Rural New Yorker.*

COMMON DIARRHŒA IN FOWLS.—A too scanty supply of grain, which necessitates an excess of green food, or an unwholesome diet of any description, are the usual causes of this complaint. The treatment is simple: five grains of powdered chalk, the same quantity of rhubarb, and three of cayenne pepper, may be administered.—*Tegetmeier.*



WILLIAMS' FAVORITE, OR EARLY RED APPLE.

The fair crop of apples which has been raised the past season in many parts of New England will, we hope, encourage farmers and others to give more thought and care to fruit raising. When the country was new and the soil full of vegetable matter in the shape of decaying roots and leaves of the old forests that formerly occupied the ground, apples grew almost spontaneously, and little skill or care was required to secure an abundant supply. But now as one travels over New England the dilapidated old orchards are the most melancholy objects that meet the eye. The gnarled and mossy trunks, dead limbs and bushy tops of the few trees that mark the sites of once thrifty orchards, suggest sad thoughts of decay and ruin.

Still, amid these evidences of weakness, failure and dissolution, one may see just enough vigorous trees and thrifty orchards to inspire hope that successful fruit raising is still possible. Even here in Massachusetts, where the ravages of the canker worm, curculio, and other insects, in addition to the apparent loss of vigor in the soil or the tree itself, have induced many experienced fruit growers to remove their grand old apple trees as cumberers of the ground, there is now and then an orchard that produces almost as vigorously as of old, not only occasionally but regularly. Of one such orchard, that of Capt. George Pierce, of Arlington, we published last year a pretty full account. We might mention another, that of the well known seedsman, and author of a Book of Flowers, J. Breck, of Brighton, who playfully remarked to us the other day that "my greatest trouble is to find barrels enough for my fruit." Neither of these men have any patent right or secret process. Both are sociable, well informed gentlemen, and are perfectly willing to give an individual or the public any information in their power, and are pleased to show visitors their grounds, their trees and their fruit, and

to detail the means by which their orchards are made exceptions to the general decay and failure of those which surround them. One of these men on being asked last year, how is it that your trees hang full while all the rest of us have no fruit, replied, "why, all I can say is, I prepare and till and mulch my ground well, keep off and destroy caterpillars, canker worms, web worms, and prune my trees myself. No matter what I am doing, if caterpillars of any kind are seen on my trees I go and destroy them forthwith; in brief, I comply with all the conditions, so far as I know them, of a good apple crop, and I get one annually, while my neighbors failing to do so, have little fruit, become discouraged, and are and have been for years digging up their trees."

This man regards the Williams' apple (Williams' Favorite, Early Red) which is represented by the above cut, as the very best early market apple. It requires a strong, moist soil and good cultivation, to bring the fruit to perfection, and then it is splendid, and the most saleable apple in the Boston market. Mr. Pierce has thirty-eight of these trees from which he gathered over 200 bushels last year, although it was a very unfavorable year for fruit. The highest price last year was $6 a bushel; the year before he sold some for $8 a bushel. Now

"What others do,
Why, with patience, may not you?"

The only reason is that you are not willing to recognize the fact that trees in our day can no more bear a good crop of apples without proper food and care, than a cow can give a good mess of milk without plenty to eat. As rich men's sons are apt to grow up without a practical knowledge of what a dollar cost, so the people of New England, judging from the almost spontaneous growth of apples when the country was new, have got wrong notions into their heads about what a bushel of apples cost. Instead of setting out one or two hundred trees, as the old settlers did, often on the poorest spot on their farms, let us try five or ten trees in the richest place we have, and take the best care of them we know how, and see if we cannot raise fruit to eat and fruit to sell.

—Dr. Durfee stated in his address at the Middlesex County fair that the value of the farms in that county is $24,000,000, and their products $8,000,000 per annum.

For the New England Farmer.

INTELLECT AND SKILL IN FARMING.

There is no occupation which is so truly scientific in all its bearings as that of farming. It is true, there are few of the mechanic arts that do not involve scientific principles; but none which are so strictly scientific as farming. Planting and growing crops are strictly chemical in their character; every process is a chemical manipulation. The composting of manures is also chemical, whether the operator understands chemistry or not. The raising of stock is strictly physiological, and any person to be a feeder and judge of stock ought to understand physiology and anatomy. And in order to be eminently successful in any of these branches, it is absolutely necessary that the farmer should be a good logician.

Now, I am aware that this will somewhat startle, or may at least move the risibility of a few, because they will readily admit that chemistry, physiology and anatomy are of eminent service to the farmer, but logic, they suppose, belongs to the lawyer, stump orator, or, perhaps, to the minister; but as to the farmer, they cannot see what he has to do with logic. They would, perhaps, be willing to admit,—as did a friend of mine the other day,—who, by the by, is an unsuccessful tradesman,—that it is easy to be a farmer, as all that it required is a good degree of muscle; but it will be found that in order to become a *successful* farmer, not only muscle, but brains are required, as much as in any branch of business, or any profession. If either can be dispensed with, it is muscle, for I am sorry to say that it is easier to hire muscle in any branch of business, than brains. There are numbers who prefer hiring muscle minus brains, to the two combined; in other words, they prefer ignorant to intelligent labor,—hence we find the farm laborers and the factory operatives unintelligent foreigners.

I have of late been reading discussions in farmers' clubs, and have discovered in them a want of knowledge on scientific principles. To illustrate one or two points, I would call attention to the uses of meadow-muck, this being one of the subjects I have seen discussed. While many testified to the increase of the manure-pile by the use of muck, there were those who contended that the hauling of muck to the barn-yard and then to the field was a useless outlay of labor, as the only good the muck had done was to dilute the manure, and the question was, "Is it not cheaper to apply the manure in its concentrated form, rather than in its more bulky form of a compost with meadow muck?" I wish to apply to this question a few scientific principles, logically deduced.

All admit that the greatest portion of meadow muck is of vegetable origin; and, as such, is a valuable fertilizer, for that which has once been vegetable is always a supporter of vege-

tation. But our labor-saver would say, then haul it from the meadow direct to the field. But we must consider that ammonia and its various combinations are our best fertilizers. They are volatile, and continually escaping, as our olfactory nerves often remind us. This loss renders the manure less valuable every hour. But meadow-muck is a great absorbent of these salts of ammonia, and wherever applied, whether in the barn-yard, hog-pen, or on night soil, the offensive smell connected with these places is lost, and the air about them is pure. Consequently, the meadow-muck, by absorbing these salts, becomes enriched by them as a fertilizer. Then, again, the decomposition of vegetation in our meadows liberates an acid which is a preservative of vegetation and resists further decay, so that we find the stumps of trees on uplands entirely moulder away in a few years, while centuries pass away and the peat and muck of the meadow remains the same. For this acid the gases and ammonia of the manure has a strong affinity, with which they combine, forming compounds highly productive of vegetation, leaving the muck free from its preserving influences, and thus prepared for further decomposition.

Manure is matter in a state of decomposition or decay, and matter in a state of decay has the property of producing decomposition or decay in other matter. These different substances, coming in contact with each other, accelerate decay in one another, and as those substances which are the most rotted are the most available as food for vegetation, the one aids the other in this great preparation. Hence we find that muck does not dilute the manure, but really *makes a manure* equally as rich in fertilizing qualities as the pure droppings from the animals, and in doing this, it takes away all stench; and the hog-pen, the vault, and the barn-yard, which have been such an offence to sense refined, are rendered objects which the most delicate would scarcely notice. It will be seen from these deductions that muck is a valuable fertilizer and a reservoir for the fertilizing qualities which most plants need. Whether it is worth hauling to our barn-yards, let the common sense of the farmer determine. T. W.

Boston, Oct. 3, 1868.

For the New England Farmer.

LETTER FROM MAINE.

Imitation grass and woods, and hills, however perfect the imitation, can give none of that gentle impulse to the involuntary side of our physical and mental life, to the pulses of the blood and the forces of brooding reverie, which we derive from contact with Nature. So when the country is "full of invitations sweet," I hie away to its recesses. In the peaceful town of Norway I generally find my Acadia, gravitating toward "Holt's Hill," nearly in the centre of the town, upon whose summit is a farm of about three hundred acres, cultivated by an industrious farmer, after whom the hill is named. The town of Norway is about eight miles square, almost wholly occupied by extensive farms. The village nestles in a valley upon the eastern boundary.

One thing very observable this year is the vegetation. The order of affairs seem to be reversed. Heretofore, Maine has been a fortnight behind Massachusetts, but this summer, the further north we penetrate, the more advanced and luxuriant we find the corn, potatoes and other vegetables. In Paris, I noticed one field of corn, covered with quite large ears, which is something of an achievement "way down East." The heat has been intense. In Gorham, forty miles beyond, the themometer one day reached 125°, and at Mt. Washington 92°, a result never before known, even to the "oldest inhabitant." One would think the South had veered round to the North, for we all know that the Southern States have suffered less from the heat than the North.

How often are we reminded, even when flitting by farms and fields even in the loneliest places seen from the car windows, that "order is Heaven's first law!" In the waving wheat, the rustling corn, the potatoes, beets, peas, beans, &c., order is closely pursued by rows, hills in rows, beds, hedges, &c. If we could throw aside this rule as unnecessary, what a queer looking world we should have! What a bother existence would be! Just imagine!

The crop of apples will be very small. The spring promised much in blossoms, but the wet season, followed by the severe July heat, has covered the ground beneath the trees with deplorable results.

The scarcity of laborers and the high wages demanded, are throwing the farmers more each year upon the use of labor-saving machines. All labor-saving machines, by the way, are but steps to climb towards heaven with, for they afford mankind more leisure for self-improvement, soften the harshness of life, making it seem less like a great working plantation, and make the heart more contented and grateful. Blessed be inventors! This summer, I hear everywhere the singing of the busy mowing machine. The crop of hay will be immense.

Hops, the cultivation of which is increasing rapidly, promise generally a heavy harvest. The Maine farmer is very shrewd. He cannot drink lager beer himself, and rather denounces its use. But he is perfectly willing to aid the Teuton in obtaining it. Each year, as the German population increases, and the American propensity to imitate or imbibe any new doctrine or habit is kept receptive, the demand for hops will increase and the production augment. And it pays profitably here, where small fruits and vegetables find no market.

The one great fault and hindrance to successful farming in this part of Maine, in my esti-

mation, is *too much land*. Many of the farmers are considered "well off." Yet their prosperity gives them no respite from really slavish toil.

"Work, work, work, while the cock is crowing aloof,
And work, work, work, till the stars shine through the roof."

They are rich only in acres, some of them possessing 300 and 500 acres. Of course a man cannot get rich from so much land, without much capital and time. He cannot take care of it usefully or successfully. His acres being far from a market, keep very low in value. Yet the sum and substance of some men's existence, their daily thought, is to add still more to their already many uncultivated acres, for which they must pay taxes, and from which they sometimes cannot obtain even the profit of the grass. Out West, where the mere turning over of the sod, and, as I have seen, the ploughing in of the seed, will produce, without further trouble, the very first year, an excellent crop, and where, also, the increasing emigration and swift, convenient rails are rapidly filling up the country, one can comprehend a man's mania for accumulating land. Every acre, especially in that thriving State, Kansas, doubles its value nearly every year. The soil, so long the browsing ground of the buffalo and wild horse, and enriched by the decay of vegetation for centuries, will need no dressing for *thirty* years. Then the taxes are as yet scarcely noticed. But in Maine, especially the northern part, there are thousands of acres as barren and rocky as when created. Years of the severest toil hardly makes them bearable, yet these mistaken farmers look upon these rocky wastes as desirable possessions. They cannot understand the meaning of "ten acres enough," and do not desire to, either. I cannot understand them. Can any one explain this mania, this "land on the brain?"

THEO. WILLISTON.

Norway, Me., July 30, 1868.

REMARKS.—We owe the writer and the reader an apology for the unintentional delay of the publication of this letter. In reply to her closing inquiry, we may remark that "Ten Acres Enough" has bought more land himself; thus proving, practically, that his theory is impracticable.

MARKETING STRAWBERRIES.—While many superficial or careless managers cannot send strawberries fifty miles in good salable condition, J. Knox of Pittsburgh sends his four hundred miles, and receives double and triple prices for them. The fruit is allowed to ripen before picking: Mr. Knox says, "We allow the fruit to mature enough for our own table before it is gathered for market." It is handled with great care, carefully assorted, and as carefully packed in neat boxes. So largely and finely grown are the berries, that ten fill a pint box. He has sent the Jucunda to New York city on Monday, reaching there on Tuesday, and kept it until the following Friday and Saturday, and sold then at higher prices than other berries brought, raised in the immediate vicinity of the city. So much for doing a thing well.—*Co. Gent.*

AGRICULTURE AT TAMPA BAY, FLA.

We compile from our exchanges some interesting facts in relation to important crops cultivated in a portion of the State of Florida, but such as we do not raise here. We think it would be exceedingly gratifying, and perhaps instructive, for some of our well-to-do farmers to visit that country and look at the modes of culture in practice there. Not that we suppose they could be adopted here, but that the more extensive the knowledge which we possess, the better will be our practice in producing all crops. Such, certainly, should be the result.

The establishment of sugar plantations is so recent, that no planter has succeeded in getting a full crop. Consequently, no well digested system of rotation has been adopted. The system adopted by some is to divide plantations into five equal portions, four-fifths of which will be planted in cane,—the fifth to lie fallow. During the seasons of leisure, this portion will be prepared in the best possible manner for planting in the ensuing spring. Some of the lands are based on marl, having a rich subsoil, but a light silicious surface soil. The fallow land is ploughed very deep with four-horse ploughs, throwing it into lands of seven feet, with deep water furrows. Into these furrows all the trash on the land, and the rotted bagessa, (the canes after they have been crushed between the rollers of the sugar mill) of a preceding crop, together with any manure which can be had, will be collected. The land will be again ploughed with four-horse ploughs, bedding on the deposited manure. When this fifth is planted in cane, the oldest of the remaining sections will be ploughed out, and subjected to the same operation. By this system the plantations will yield from 2000 to 3000 pounds of sugar to the acre.

Rice can be grown very profitably on the high lands in all parts of the State. The yellow or golden rice is best adapted to either wet or dry culture. There are large bodies of land along the Gulf coast admirably adapted to the cultivation of this staple.

The fruit culture is confined to the production of oranges, lemons, limes, guavas, bananas, pine apples, cocoa nuts, &c., &c. On the hummock lands from 300 to 400 barrels of

oranges, lemons and olives to the acre are sometimes realized; on pine lands, with proper attention, 200 barrels per acre. Wild grapes, some of them very superior, hanging in large heavy clusters, both white and purple, are abundant. The Bermuda arrow root flourishes throughout southern Florida, producing 200 or 300 bushels to the acre, yielding, with very imperfect mills, six or eight pounds of flour to the bushel, worth twenty-five to thirty cents per pound. The country is well adapted to the raising of horses and mules. The climate affords perennial pasture, and renders unnecessary expensive provision of forage and stabling. As many of these animals as might be required for the country, could be raised to the age of three years, without requiring the expenditure of as many dollars. The healthfulness of these animals in this section is notorious.

FUNGI, OR SMUT.

The farmer, in passing through his fields of corn or wheat, has his attention often arrested by ears of the grain which have undergone a most singular metamorphosis or change. In place of the sound kernels, he finds a huge black excrescence, composed of what seems to be an impalpable, sooty dust, which soils the fingers and clothing when brought in contact with it. This smut, or fungoid growth, is a very remarkable production, and, regarded from every point of view, seems to be devoid of all use—a thing to be hated—an abomination. The mass of sooty dust is a regular plant, of most singular and complex structure, and possessing a reproductive power hardly excelled by any vegetable or animal organism. As though the chances of the hateful thing for multiplying itself were not great enough with ordinary organs, it has conferred upon it three or four different modifications of the function. They may multiply themselves by means of the spawn, or mycelium, by self-division or lamination, which may be regarded as a species of germination, or they may be propagated by seeds or their equivalents, produced in special receptacles. Every cell or tissue may contain its germs, and each germ springs up into new forms, equally fitted for propagation, in a few hours or minutes. While examining some of the cells under the microscope, they are observed to pass through the course of their existence, and give birth to thousands of new organisms.

The number of germs or other reproductive bodies which parasitic fungi produce, is incalculable—almost infinite. One grain in weight of the black matter found in place of the ear of corn, contains upwards of *four millions* of spores or seed vessels, which are again filled with sporules so minute that the highest powers of the microscope fail to distinguish them.

Doubtless the reader, if familiar with farm-work, and a keen-sighted observer, has often seen a kind of ethereal smoke or evaporation proceeding from the diseased heads of grain, when moved by a single breeze. This apparent vapor is formed of the millions upon millions of the seeds of the fungi, which, proceeding from the ruptured vessels, float like an airy cloud or gossamer veil, whither the winds may drive them. The atmosphere is loaded with these germs in the latter days of summer; and, if it were not for a wise provision connected with their fructification and growth, fungus, or mildew, would spread over the vegetable world like a pall of death. Nothing but fire or strong acids seems competent to destroy the seeds, so tenacious are they of vitality. Summer's heat nor winter's frost cannot kill, nor water drown them.

Fortunate indeed is it, that they require peculiar atmospheric and other conditions for their *growth*. If these are not favorable, they will not spread nor develop themselves. Some seasons are peculiarly suited to the awakening of the dormant seeds which rest upon everything, although entirely invisible to the naked eye. Last year, the fungus peculiar to the grape, called mildew, manifested itself to a fearful extent in many sections of the country, causing great loss. Sometimes the wheat crop is cut off by the fungoid growths called rust; and, occasionally, all vegetable substances suffer from the rapid fructification of these strange parasitic plants.

Sulphurous acid destroys the germs; and this we secure by the application of sulphur to leaves and fruits before the pest fairly manifests itself. Under cover, in glass structures, it can be completely mastered by proper care; but, out of doors, the ruin can hardly be averted.—*Dr. Nichols' Journal of Chemistry.*

BOTS IN HORSES AGAIN.

I see in the last number of the *Homestead*, an article copied from the correspondence of the New England Farmer, taking the ground that the bots in horses are very injurious to the horse, causing death. But the writer is entirely mistaken in his conclusions on the subject.

From many investigations into the subject, and from the testimony of Youatt, Spooner, Stewart, Dadd, and others, I am perfectly satisfied that the bots never turn upon the stomach until it is so diseased that death is certain.

The stomach of the horse is the chosen home of the bots, and why should they try to make a way out of it, until the appointed time? He does not feed upon the stomach, but upon the chyme, and only turns upon the stomach to escape death. Nine out of ten of the horses whose stomachs we have examined, have contained bots. Some of those horses had been killed by accident, while in perfect health. We have found the bots eating through the stomachs of those horses, within three or four hours after death, although they were perfectly

well, till the moment of death. The evidence to me is conclusive, that they in no way injured the stomach until death.

A valuable essay, by Geo. H. Dadd, V. S. on this subject, has recently appeared in the *American Farmer*, and as both he and Dr. Stewart are authority in this country, their evidence is entitled to great weight.

I wish it might put an end to the present system of "doctoring (killing?) horses for the bots." There are hundreds of valuable horses killed by the awful drugging they get to kill the bots, which can't be killed by anything you can put in his stomach.

Mayhew records an instance, in which a portion of the stomach, covered with bots, was corked up in Spirits of Wine for two years, without killing them. Bracy Clark, an English veterinarian, to whom Mayhew says "the public owe all their knowledge of the bot fly," claims that "the bot is harmless if not beneficial."—*C. W. D., Philadelphia, in the Homestead.*

EARTHQUAKES.

"There is," says Humboldt, "no other outward manifestation of force known to us—the murderous inventions of our own race included—through which, in the brief period of a few seconds or minutes, a larger number of human beings have been destroyed than by earthquakes." Lightning and storm, war and plague, are but weak and inefficient agents of destruction in comparison with the earth's internal forces. And as earthquakes surpass all other phenomena as agents of sudden destruction, so the impression which they produce on those who, for the first time, experience their effects, is peculiarly and indescribably awful. Men of reputed courage speak of a feeling of "intolerable dread" produced by the shock of an earthquake, "even when unaccompanied by subterranean noises." The impression is not that of simple fear, but a feeling of absolute pain. The reason seems for a while to have lost the power of separating real from imaginary causes of terror. The lower animals also are thrown into a state of terror and distress. "Swine and dogs," says Humboldt, "are particularly affected by the phenomena of earthquakes." And he adds that "the very crocodiles of the Orinoco, otherwise as dumb as our little lizards, leave the shaken bed of the stream and run bellowing into the woods." Humboldt's explanation of the peculiar sensations of alarm and awe produced by an earthquake upon those who for the first time experience the effects of the phenomenon, is in all probability the correct one. "The impression here is not," he says, "the consequence of the recollection of destructive catastrophes presented to our imagination by narratives of historical events; what seizes us so wonderfully is the disabuse of that innate faith in the fixidity of the solid and surset foundations of the earth. From early childhood we are habituated to the contrast between the mobile element water, and the immobility of the soil on which we stand. All the evidences of our senses confirm this belief. But when suddenly the ground begins to rock beneath us, the feeling of an unknown mysterious power in nature coming into operation and shaking the solid globe, arises in the mind. The illusion of the whole of our earlier life is annihilated in an instant.—*Cornhill Magazine.*

RHEUMATISM.—What is the matter with my mare? She raised a colt last year, has not been in good condition since the colt was weaned, but I have worked her some, until a short time since. When I took her out of the pasture she was very lame, hind leg was swollen and feverish at gambrel joint. I took some blood from the neck, and bathed the leg with liniment. Next day another leg was swollen, and the swelling seems to go from one limb to another, and now she is so stiff that she can hardly move, with swelling on the belly. She has no appetite and cannot live but a short time without help. H. C.

A dose of physic (seven or eight drachms of aloes) should be given to the mare and a drachm of acetate of potash dissolved in the water that she drinks, so that she may take that quantity each day. The swollen leg should be fomented with hot water for half an hour several times a day, and should be carefully rubbed dry after each fomentation. The swollen part of the leg should also be bandaged with flannel.—*Western Rural.*

AGRICULTURAL JOKES.—The Ohio *Farmer* gets off the following:—

Large horses are generally most admired by farmers; but farmers are most admired who *pony* up.

Prosperity is generally based on knowledge and industry; the swine will get most that *nose* most.

Farmers are like fowls—neither will get full *crops* without industry.

Because a man who attends a flock of sheep is a shepherd, makes it no reason that a man who keeps cows should be a *cow-ard.*

We like to see a farmer increase the growth of useful plants and shrubs around his home, but do not like to see him use rails, poles and boards to *prop-a-gate* with.

THE *California Farmer* says that Thomas A. Garey and two other gentlemen in Los Angelos are commencing the silk business in earnest. They have now growing about 75,000 good sized mulberry trees, and 125,000 seedlings; about 150 to 200,000 worms will be fed this year. Their work is a success, as is shown by the cocoons now on exhibition in the collection of Mr. Prevost, the pioneer silk grower, at the Pavilion, in San Francisco.

Ladies' Department.

THE EXPECTED SHIP.

BY J. G. SAXE.

Thus I heard a poet say,
As he sang in merry glee:
"Ah! 'twill be a golden day,
When my ship comes o'er the sea!

"I do know a cottage fine
As a poet's house should be,
And the cottage shall be mine,
When my ship comes o'er the sea!

"I do know a maiden fair,
Fair and fond and dear to me,
And we'll be a wedded pair,
When my ship comes o'er the sea!

"And within that cottage fine,
Blest as any king may be,
Every pleasure shall be mine,
When my ship comes o'er the sea!

"To be rich is to be great;
Love is only for the free;
Give me patience while I wait
Till my ship comes o'er the sea!"

Months and years have come and gone
Since the poet sang to me,
Yet he still keeps hoping on
For the ship from o'er the sea!

Thus the siren voice of Hope
Whispers still to you and me
Of something in the future's scope,
Some golden ship from o'er the sea!

Never sailor yet hath found,
Looking windward to the lee,
Any vessel homeward bound,
Like that ship from o'er the sea!

Never comes the shining deck,
But that tiny cloud may be,
Though it seems the merest speck,
The promised ship from o'er the sea!

Never looms the swelling sail,
But the wind is blowing free,
And that may be the precious gale
That brings the ship from o'er the sea!

HOUSEHOLD RECEIPTS.

A reader who says she has tried some of the original receipts published in the FARMER, and found them very good, desires her sister housewives to keep this department well filled, and contributes her share, as follows:—

Making Yeast.

Take five good-sized potatoes; pare and wash clean; grate them fine; add one cup of sugar; two-thirds cup of salt; then pour in about three quarts of boiling water, and keep stirring; when about milk warm, add one cup of hop water and a cupful of yeast, if you have it, if not, take one yeast cake, dissolved in a cup of warm water.

Cottage Pudding.

One cup of milk; one egg; two tablespoonfuls of melted butter; two cups of flour; one teaspoonful of cream of tartar; half a teaspoonful of soda. Bake half an hour and serve with hot sauce. ELLIE.

Chester, N. H., 1868.

TOMATOES NEXT WINTER.—This favorite vegetable is eaten with added relish during winter, when the garden is locked up, and "sauce" is hard to procure. A little painstaking now will secure a good supply for the time of need. Select ripe, sound tomatoes, place them in a colander, immerse them in boiling water to loosen the skins, lift them out, and peel them at once. Cook them in a porcelain lined kettle. Tin will answer if it be not much worn, but iron is easily corroded by their acid, and the fruit will be spoiled in color and flavor by its use. Stir with a wooden spoon or pudding stick. Tomatoes may be kept without very thorough cooking, but as they are largely composed of water the sauce will be much better if boiled down one-half or more of its original bulk. Put them up in tin cans if bottles cannot be procured, and solder the tops tight while the contents are boiling hot. This is a troublesome process, and fruit preserving jars or bottles, which are now easily had at almost every country store, will be preferred. With these, as with all vegetables or fruits to be kept air-tight, the one great point of care is to *make* them air-tight. Have the bottles heated that they may not crack, pour in the hot contents, filling the jar, and fasten the cover at once. By the use of fruit-preserving powders or solution, which prevent fermentation, less care is needed to exclude the air. Many who have used these preparations prefer them to the former method. —*American Agriculturist.*

APPLE JAM.—The apples which should be ripe, and of the best eating sort, being pared and quartered, are put into a pan with just water to cover them, and boiled until they can be reduced to a mash. Then for each pound of the pared apples, a pound of sifted sugar is added, being sprinkled over the boiling mixture. Boil and stir it well until reduced to a jam. Then put it into pots. The above is the most simple way of making it; but to have it of the best possible clearness, make a thick syrup with three pounds of sugar to each pint of water, and clarify it with an egg. Then add one pint of this syrup for every three pounds of apples, and boil the jam to a proper thickness.

SWEET SPICED PEACHES.—Select large freestone peaches with large pits, quite ripe, but not the least soft; remove the roughness of the skin by friction; then halve the peach and take out the pit; fill the cavity with white mustard-seed, one pod of bird or cherry pepper very small, or if these cannot be obtained, two kernels of black pepper, a few cassia buds, and a piece of mace; sew them up,

pour over them hot vinegar, three times; add to one quart of vinegar one pound of sugar; heat the syrup and pour it over the fruit; cover tight and keep the peaches under the syrup; examine often, and keep them in a cool place; if the fruit is very hard, after being scalded, set the bottles in the bath until heated through.

APPLE MELANGE.—The followlng preparations, in which apples are the principal ingredients, make excellent dessert:—

Apple-Snow.—Put twelve good tart apples in cold water, and set them over the fire; when soft, drain the water, strip the skins off the apples, core them, aud lay them in a deep dish. Beat the whites of twelve eggs to a stiff froth; put half a pound of finely-powdered white sugar to the apples; beat them to a stiff froth, and add the beaten eggs. Beat the whole to a stiff snow; then turn it into a dessert-dish, and ornament it with myrtle or box.

A Delicious Dish of Apples.—Take two pounds of apples, pare and core them, slice them into a pan; add one pound loaf-sugar, the juice of three lemons, and the grated rind of one. Let these boil about two hours. Turn it into a mould, and serve it with thick custard or cream.

Apple-Pudding.— Pare and stew three pints of apples; mash them, and add four eggs, a quarter of a pound of butter, sugar and nutmeg, or grated lemon. Bake it on short crust.—*Germantown Telegraph.*

PICKLE CHOW-CHOW.—Two quarts green tomatoes, two quarts white onions, two quarts pickling beans, one dozen green cucumbers, one dozen green peppers, one large or two small heads of cabbage. Chop all fine; sprinkle a teacup of salt over it, and let it stand over night. Next morning pour off the brine, season with two tablespoons of ground mustard, two tablespoons celery seed, two of black pepper, one half tablespoon of cayenne, two of ground cloves, two of turmeric, two of curry powder. Cover the mixture with the best of vinegar, with a cup of brown sugar. Boil two hours slowly, continually stirring. When cooked, add two tablespoons of salad oil, while the mixture is hot.

DRESS IN RELATION TO FIGURE.

In adapting the dress to the shape and size of the wearer, a certain knowledge of drawing, and of the proper proportions of the figure is, of course, the chief help. There are, however, a few well ascertained rules which may safely be taught. One, for instance, is that transverse shapes generally tend to lessen height and increase breadth, while longitudinal forms have the opposite effect. Another well-known rule (which I believe is easily explained by a reference to optical science) is the tendency of light colors to increase the apparent size, and *vice versa.* People of more than average size should be cautious about wearing white or very light colors for this reason, although it must always be remembered that proportion and color impress the eye so much more sensibly than mere scale that this rule is a very subordinate one, and only to be applied after those more important subjects have been thoroughly considered. It should, however, be remembered that more than average size naturally involves a certain degree of conspicuousness, which makes any peculiarity of dress doubly undesirable in such cases. A small person may wear with impunity both colors and shapes, which would be inexcusably striking on a large figure. Nothing goes so far to redeem unusual size as complete repose both in form and color. Much trimming, loose ends and streamers, frills, and furbelows, and caprices of all kinds are apt to become intolerable when magnified, while on a small scale they may please, by a certain fluttering airiness which is in keeping with the impression of a tiny creature. But here also proportion may almost reverse the effect of scale. A short heavy figure may even more imperatively need quietness in dress than one of twice its actual volume which has run up into slenderness. And this naturally leads me to the second respect in which dress should be adapted to the wearer, namely, character; which, indeed, is scarcely separable from the form on which it is increased, and according to which such questions as the last should mainly be decided.—*Cornhill Magazine.*

THE CHEMISTRY OF FURNITURE.

Young housekeepers do not always understand the theory of the chemical and mechanical action of different substances on articles of furniture. The substances from which furniture is chiefly exposed to injury are water, oils, alcohols, and acids. Acids act on marble. Marble is itself composed of carbonate of lime; that is, it is a compound of carbonic acid and lime. Now, the carbonic acid has a comparatively weak affinity for lime, and most other acids will prevail over it and take its place when brought in contact with it, thus destroying the texture of the stone, liberating the carbonic acid, and leaving nitrate of lime, or muriate of lime, or sulphate, or acetate of lime, as the case may be, in the form of a white powder, in its place. But oils, alcohols, and water produce no effect on marble. All varnished or polished surfaces of wood on the other hand, while not injured usually by acids, are attacked by alcohol. Varnishes are composed of different gums and resins, which are generally soluble in alcohol. Many of them are made by dissolving the material in alcohol so as to liquify them, and then, when they are applied, the alcohol evaporates, leaving the

gum or resin in a thin, even coating over the surface. If now any alcoholic substance comes upon such a surface, whether it be alcohol itself, as used for lamps, or spirits of any kind, or even wine, which contains but a small per centage of alcohol, a portion of it is dissolved, and the brilliancy of the surface is destroyed. Oils will not attack either marbles or varnished surfaces, and will do no injury except to naked wood or other porous substances which admit them into the pores, from which they cannot afterwards be easily expelled. Water affects no substances except such as have open pores exposed, in which case it enters and causes the substance to swell, or such as are soluble in water, as glue in joints, and mucilage or gum arabic, used sometimes for attaching superficial ornaments to fancy work.

Hair Washes.—It is only right to refer to a source of possible disease which is peculiarly wide spread just now, and against which the public should be cautioned. At the present time there is quite a rage for the use of hair "washes" or "restorers," which, whilst the charge of their being "dyes" is indignantly repudiated, yet in a short time "restore" the color of the hair. The active agent in these washes is, of course, lead. In the majority of cases, probably, a moderate use of such a lotion would be unattended with mischief; but it is worth remembering that palsy has been known to be produced by the long continued use of cosmetics containing lead. But of the thousands of persons who are applying lead to their scalps, there will doubtless be some with an extreme susceptibility to the action of the poison, and these will certainly run no inconsiderable risk of finding the "restoration" of their hair attended by loss of power in their wrists.—*The Lancet.*

The Virtues of Borax.—The washerwomen of Holland and Belgium, so proverbially clean, and who get up their linens so beautifully white, use refined borax as washing powder, instead of soda, in the proportion of a large handful of borax powder to about ten gallons of boiling water; they save in soap nearly half. All the large washing establishments adopt the same mode. For laces, cambrics, &c., an extra quantity of the powder is used, and for crinolines, (requiring to be made stiff,) a strong solution is necessary. Borax being a neutral salt, does not in the slightest degree injure the texture of the linen; its effect is to soften the hardest water, and therefore it should be kept on the toilet table. To the taste it is rather sweet, is used for cleaning the hair, is an excellent dentrifice, and in hot countries is used in combination with tartaric acid and bi-carbonate of soda as a cooling beverage.

Ladies' Horns.—We must commiserate the unfortunate Charles VI., of France, who sought to beguile thought in any way, however puerile, when we remember what manner of of woman was his coarse and cruel consort, Isabella of Bavaria. Surely no man in his senses can wonder that the sight of her did occasionally scare the imbecile king, for on her head she wore horns, and these grew wider and wider, and in proportion higher. This formidable horn head-dress, variously decked with jewels and fur, was introduced into France by the queen above-named, and eventually became so monstrous that, the horns growing at least two yards apart from each other, door-ways were enlarged to admit the breadth of them. And not only horns, but tails were at that time worn by ladies; and to these robes *a-queue*, or long-train dresses, were attached sleeves which swept the ground. In addition to all this, it may be observed that ornaments resembling animals' ears were sometimes appended to the horns; but the under-garments of this amazing costume were usually of wool or coarse cloth, for fine linen was at that time so rare in France that the mighty Isabella herself possessed but a scanty supply of it as a luxury.